Transport Canada Transports Canada

TP 13198E

TRANSPORTATION IN CANADA 2004

ANNUAL REPORT

Canada

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Minister of Transport | Ministre des Transports

Ottawa, Canada K1A 0N5

MAY 1 8 2005

Her Excellency the Right Honourable Adrienne Clarkson, C.C., C.M.M., C.O.M., C.D.
Governor General of Canada
Rideau Hall
1 Sussex Drive
Ottawa ON K1A 0A1

Excellency:

It is with great pleasure that I submit to your attention the ninth Annual Report on the state of transportation in Canada. This report is produced in conformity with the statutory requirements spelled out in Section 52 of the *Canada Transportation Act*.

Canadians' well being depends on the ability of our transportation system to span distances, to allow dynamic trade relationships with other nations, and to sustain competition in the global marketplace. A safe and secure transportation system also plays an important role in attracting investment and supporting economic growth. Canada's prosperity is closely linked to its trade relationships with other countries, especially with the United States. The expansion of the European Union and the emerging economies of China, India and Brazil represent an increasing challenge, forcing our transportation system to rapidly evolve and adjust to economic globalization and integration.

Through the analysis of the most recent information available, this report examines the role of the Canadian transportation system in the production, distribution and consumption of material goods and services, as well as the evolution of transportation demand and its response to changing needs and market conditions.

This report on the state of the Canadian transportation system provides relevant information that informs policy and program decision-making.

Yours sincerely,

Hon. Jean-C. Lapierre, P.C., M.P.

TABLE OF CONTENTS

		Page
	Report Highlights	i
1.	**Introduction**	1
2.	**Transportation and the Economy**	3
	Canadian Economic Performance	3
	International Trade and Trade Flows	5
	Areas of Importance to Transportation	7
	Productivity and Price Performance of Transport	9
	Importance of Transportation to the Canadian Economy	9
3.	**Government Spending on Transportation**	13
	Government Transportation Expenditures	13
	Total Transportation Revenues by Level of Government	16
	Overview of Expenditures and Revenues by Mode	16
4.	**Transportation Safety and Security**	19
	Transportation Safety	20
	Transportation Security	30
5.	**Transportation and the Environment**	35
6.	**Rail Transportation**	43
	Major Events in 2004	43
	Infrastructure	43
	Industry Structure	43
	Employment	44
	Energy	44
	Freight Transportation	45
	Passenger Traffic	45
	Price, Productivity and Financial Performance	48
		49
7.	**Road Transportation**	51
	Major Events in 2004	51
	Infrastructure	51
	Industry Structure	52
	Passenger Transportation	52
	Freight Transportation	58
	Trucking Freight Transportation	59
		61

TABLE OF CONTENTS (Cont'd)

Page

8. Marine Transportation 65
Major Events in 2004 65
Infrastructure 67
Marine Pilotage 71
Industry Structure 75
Passenger Transportation 77
Freight Transportation 78

9. Air Transportation 85
Major Events in 2004 85
Infrastructure 88
Industry Structure 89
Price, Productivity and Performance 91
Freight Transportation 92
Passenger Transportation 92

LIST OF TABLES

	Title	Page
2.	**Transportation and the Economy**	
2-1:	General Economic Indicators, 2004	3
2-2:	Provincial Economic Growth, 2004/03	5
2-3:	International Travel, 2004	8
2-4:	Commercial Transportation as a Proportion of GDP, 2004	9
2-5:	Transportation Demand as a Proportion of GDP, 2004	10
2-6:	Commercial Transportation as a Per Cent of GDP by Province and Territory, 2001	10
2-7:	Personal Expenditures on Transportation by Province and Territory, 2003	11
3.	**Government Spending on Transportation**	
3-1:	Governments' Gross and Net Expenditures on Transportation, 2000/01 – 2004/05	13
3-2:	Federal Operating, Maintenance and Capital Expenditures, 2000/01 – 2004/05	14
3-3:	Direct Federal Subsidies, Grants and Contributions by Mode, 2000/01 – 2004/05	15
3-4:	Government Revenues from Transport Users, 2000/01 – 2004/05	16
3-5:	Transport Expenditures/Revenues by Mode and Level of Government, 2000/01 – 2004/05	17
4.	**Transportation Safety and Security**	
4-1:	Public's Confidence Rating of the Safety and Security of Air, Rail, Marine and Road Travel, January 2005	19
4-2:	Key Transport Canada Security Initiatives in 2004	20
4-3:	Summary of Transportation Safety Statistics by Mode, 2004 (2003 for Road)	21
6.	**Rail Transportation**	
6-1:	Railways in Canada, 2004	43
6-2:	Railway Rationalization in Canada	44
6-3:	Railway Revenues, 2002 and 2003	44
6-4:	Employment in the Rail Industry, 2002 and 2003	45
6-5:	Railway Output in Millions of Revenue Tonne-Kilometres, 2002 and 2003	45
6-6:	Railway Fuel Consumption, 2002 and 2003	45
6-7:	Financial Indicators of Shortline Railroads,1 2001 – 2003	49
7.	**Road Transportation**	
7-1:	For-Hire Carrier Revenues by Market Segment, 2001 – 2003	55
7-2:	Distribution of Total For-Hire Trucking Revenues by Size of Carriers, 2000 – 2003	55
7-3:	Bus Industry Revenues by Business Lines, 1996 – 2003	57
7-4:	Distribution of Vehicle Activity by Vehicle Body, 2003	58
7-5:	Light Vehicle Statistics by Province/Territory, 2003	59
7-6:	Trip Purpose for Light Vehicles, 2003	59
7-7:	Canada's Heavy Truck Fleet, 2003	60
7-8:	Heavy Truck Statistics, by Configuration, 2003	60
7-9:	Heavy Truck Vehicle-Kilometres by Vehicle Configuration, 2003	61
7-10:	Use of Heavy Vehicles, 2003	61
7-11:	Selected Provincial Systems Indicators, 2003	63
8.	**Marine Transportation**	
8-1:	Port Classifications as of December 31, 2004	68
8-2:	SCH Fishing Harbours by Management Type and Region, as of December 31, 2004	70
8-3:	SCH Recreational Harbours Divested by Region, as of December 31, 2004	71
8-4:	Recipients of Divested SCH Recreational Harbours, as of December 31, 2004	71
8-5:	SCH Recreational Harbours by Management Type, as of December 31, 2004	71
8-6:	Pilotage Authority Financial Results, 2004	71
8-7:	Total Pilotage Assignments and Assignments Per Pilot, 2004	72
8-8:	Canadian Coast Guard Revenues and Expenditures, 2001/02 – 2004/05	73
8-9:	Canadian Coast Guard Planned Revenue and Expenditures, 2004/05	73
8-10:	St. Lawrence Seaway Cargo Movements, 2003 and 2004	74
8-11:	St. Lawrence Seaway Traffic by Commodity, 2003 and 2004	74
8-12:	St. Lawrence Seaway Financial Performance, 2001/02 to 2003/04	75

	Title	Page
8-13:	Canadian-Registered Fleet by Type, 1984, 1994 and 2004	75
8-14:	Shipping Conferences Serving Canada in 2004	77
8-15:	International Cruise Ship Traffic at Major Canadian Ports, 2003 and 2004	78
8-16:	Canada's Marine Traffic Statistics by Sector, 2002 and 2003	78
8-17:	Canadian-Flag Share of Canadian Waterborne Trade, 2003	79
8-18:	Share of Tonnage Carried by Foreign-Flag Ships in the Canadian Coasting Trade, 2001 – 2003	79
8-19:	Marine Domestic Flows by Canadian Region, 2003	79
8-20:	Conference/Non-Conference Shares of Canadian Liner Trade, 2002 – 2003	80
8-21:	Liner Traffic by Region, 2003	80
8-22:	Canada's Maritime Trade with the United States, 2002 – 2003	81
8-23:	Canada's Marine Traffic to the United States, 2003	81
8-24:	Canada's Marine Traffic from the United States, 2003	81
8-25:	Canada's Maritime Overseas Trade, 2002 – 2003	82
8-26:	Canada's Marine Traffic to Overseas, 2003	82
8-27:	Canada's Marine Traffic from Overseas, 2003	82
8-28:	Value of Marine Share of Canadian International Trade, 2003	83
9.	**Air Transportation**	
9-1:	Air Passenger Traffic, 2000 – 2004	93

List of Figures

	Title	Page
2.	**Transportation and the Economy**	
2-1:	Real GDP by Major Sector, 1999 – 2004	4
2-2:	Real GDP: Canada and Other Regions, 2000 – 2004	4
2-3:	Value of Goods Traded Between Canada and the United States, 1988 – 2004	6
2-4:	Value of Goods Traded Between Canada and Other Countries, 1988 – 2004	6
2-5:	Value of Goods Traded Between Canada and China (People's Republic), 1988 – 2004	7
3.	**Government Spending on Transportation**	
3-1:	Government Expenditures and Revenues on Transportation, 1996/97 – 2003/04	14
4.	**Transportation Safety and Security**	
4-1:	Accidents and Accident Rates per Activity Measure for Rail, Road, Marine and Aviation	22
4-2:	Crossing and Trespasser Accidents, 1995 – 2004	23
4-3:	TDG Reportable Accidents by Mode and at Transportation Facilities, 1995 – 2004	28
4-4:	Confidence in Security to Protect Air Travellers	30
4-5:	Passenger Screening	30
5.	**Transportation and the Environment**	
5-1:	Total GHG Emissions by Sector, 2002	36
5-2:	Trends in GHG Emissions and Transportation Activity, 1990 – 2002	36
5-3:	Rail, Aviation, Marine GHG Emissions, 1990 – 2002	37
5-4:	Air Pollution Emissions from the Transportation Sector, 1990 – 2002	37
7.	**Road Transportation**	
7-1:	Trucking Industry Structure and Revenues, 2003	53
7-2:	Sales of Class 8 Trucks in Canada, 1990 – 2003	55
7-3:	Total Revenues by Source – Urban Transit Sector, 2003	57
7-4:	Long-Term Trend in Urban Transit, 1982 – 2003	57
7-5:	Tonne-Kilometres of Freight Moved – Canada-Based For-Hire Trucking, 1987 – 2003	61
8.	**Marine Transportation**	
8-1:	Traffic Shares by Port Groups, 2003	69

List of Addendum Tables

The Addendum is available on Transport Canada's Web site at: www.tc.gc.ca.

	Title	*Page*
2.	**Transportation and the Economy**	
A2-1:	Modal Shares in Canada–United States Trade, 1994 – 2004	A6
A2-2:	Canada/Other Countries Trade, by Mode and Sector, 1994 – 2004	A8
A2-3:	Canada–United States Trade, by Province, 2003 – 2004	A8
A2-4:	Canada's Road Trade with the United States by Busiest Border Crossing Points, 2004	A8
A2-5:	Canada-United States Trade, by Main Trade Flows, 2004	A9
A2-6:	Canada's Exports by Origin, Destination and Mode of Transport, 2004	A9
A2-7:	Canada's Imports by Origin, Destination and Mode of Transport, 2004	A9
A2-8:	Canada's Exports by Main Countries, 2003 – 2004	A10
A2-9:	Canada's Imports by Main Countries, 2003 – 2004	A10
A2-10:	Canada's Merchandise Trade – Top 25 Partners, 2004	A10
A2-11:	Tourism Demand in Canada, 2000 – 2004	A11
A2-12:	Canadian Travel Account and Passenger Fares, 2000 – 2004	A12
A2-13:	Domestic Travel in Canada, 1999 – 2003	A13
A2-14:	Domestic Travel by Mode of Transport and by Purpose, 2003	A14
A2-15:	International Travel Summary, 2000 – 2004	A14
A2-16:	Visitors to Canada from Countries Other than the United States, 2000 – 2004	A15
A2-17:	Overnight Visits to the U.S. by Canadians by Selected States, 2002 and 2003	A16
A2-18:	Same Day Visits to the United States by Canadians by Selected States, 2002 and 2003	A16
A2-19:	Overnight Visits by Canadians to Selected Countries other than the United States, 2002 and 2003	A16
A2-20:	Canada–United States Travel by Purpose of Travel, 2002 and 2003	A17
A2-21:	Overseas Travel by Purpose of Travel, 2002 and 2003	A17
A2-22:	Employment in the Transport Sector, 1998 – 2004	A17
A2-23:	Employment in the Rail Industry, 1998 – 2003	A17
A2-24:	Average Annual Compensation in the Rail Industry, 1998 – 2003	A18
A2-25:	Total Employment in the Trucking Industry, 1998 – 2003	A18
A2-26:	Total Employment in the Trucking Industry by Region, 1998 – 2003	A19
A2-27:	Average Weekly Earnings in the Trucking Industry, 1998 – 2004	A20
A2-28:	Employment in Taxi and Limousine Services by Province, 1998 – 2004	A20
A2-29:	Full-Time Employees in the Bus Industry, 1998 – 2003	A20
A2-30:	Urban Transit Employment by Region, 1998 – 2003	A20
A2-31:	Average Annual Salary in the Bus Industry, 1998 – 2003	A21
A2-32:	Employment by Canadian Port Authorities, 1998 – 2004	A21
A2-33:	Average Annual Employment in the Marine Transport Industry, 1998 – 2004	A21
A2-34:	Regional Distribution of Employment by Ferry Operators, 1998 – 2003	A22
A2-35:	Employment by Category, St. Lawrence Seaway Management Corporation, 1998 – 2004	A22
A2-36:	Employment by Canadian Pilotage Authorities, 1998 – 2004	A22
A2-37:	Employment by Maritime Employers Associations, 1998 – 2004	A22
A2-38:	Annual Labour Costs Per Employee, Canadian-Based Marine Carriers, 1998 – 2001	A23
A2-39:	Employment in the Air Industry, 1998 – 2003	A23
A2-40:	Employment – NAS Airports, 1998 – 2004	A23
A2-41:	Employment Related to Travel Arrangement and Reservation Services, 1998 – 2004	A24
A2-42:	Annual Labour Costs Per Employee of Canadian Air Carriers, 1998 – 2003	A24
A2-43:	Other Direct Transport-Related Employment, 1998 – 2004	A24
A2-44:	Transportation-Related Employment in Federal Departments and Agencies, 1998/99 – 2004/05	A25
A2-45:	Average Weekly Earnings in the Transportation and Warehousing Sector by Mode, 1998 – 2004	A25
A2-46:	Average Weekly Earnings in the Transportation and Warehousing Sector by Region, 1998 – 2004	A25
A2-47:	Labour Action by Mode of Transport, 1998 – 2004	A26
A2-48:	Total Energy Use in the Canadian Economy by Sector, 1993 – 2003	A26
A2-49:	Transportation Energy Consumption by Type and Mode, 1993 – 2003	A27
A2-50:	Transportation Energy Use by Province, 1993 – 2003	A28
A2-51:	Road Energy Consumption by Province, 1993 – 2003	A28
A2-52:	Aviation Energy Consumption by Province, 1993 – 2003	A28
A2-53:	Pipeline Energy Consumption by Province, 1993 – 2003	A29
A2-54:	Marine Energy Consumption by Province, 1993 – 2003	A29
A2-55:	Rail Energy Consumption by Province, 1993 – 2003	A29

	Title	Page
A2-56:	Crude Oil Prices — Canadian and US$ Per Barrel, 1991 – 2004	A30
A2-57:	Retail Price of Regular Unleaded Gasoline — Selected Cities, 1993 – 2004	A30
A2-58:	Retail Price of Road Diesel — Selected Cities, 1993 – 2004	A30
A2-59:	Components of the Retail Price of Road Fuels — 2004 National Averages	A31
A2-60:	Price of Other Transportation Fuels, 1991 – 2004	A31
A2-61:	Price and Output Indicators, Transport Industries, 2001 – 2003	A31
A2-62:	Efficiency Indicators, Transport Industries, 2001 – 2003	A32
A2-63:	Cost Structure of Transport Industries, 2000 – 2003, (Per cent of Total Costs)	A32
A2-64:	Financial Performance of Transportation Industries, 2001 – 2003	A33
A2-65:	Personal Expenditures on Transportation, 2004	A34

3. Government Spending on Transportation

A3-1:	Gross and Net Expenditures on Transportation by Governments, 1995/96 – 2004/05	A35
A3-2:	Operating, Maintenance and Capital Expenditures by the Federal Government, 1996/97 – 2004/05	A36
A3-3:	Direct Federal Subsidies, Grants snd Contributions by Mode, 1996/67 – 2004/05	A37
A3-4:	Government Revenues From Transport Users, 1996/97 – 2004/05	A38
A3-5:	Transport Expenditures & Revenues by Mode and Levels of Government, 1996/97 – 2004/05	A39
A3-6:	Distribution of Provincial and Local Transport Expenditures by Province, 1994/95 – 2003/04	A40
A3-7:	Detailed Provincial/Territorial and Local Transport Expenditures by Mode by Province/Territory, 1994/95 – 2003/04	A41

4. Transportation Safety and Security

A4-1:	Summary of Transportation Safety Statistics for Aviation, Marine, Rail, Road and TDG, 1994 – 2004	A53
A4-2:	Railways Under Federal Jurisdiction, 1999 – 2004	A54
A4-3:	Railways Under Federal Jurisdiction, Accidents by Province, 1999 – 2004	A55
A4-4:	Railways Under Federal Jurisdiction, Crossing and Trespasser Accidents, 1999 – 2004	A56
A4-5:	Road Casualty Collisions, Fatalities and Injuries, with Rates (per 10,000 MVR and billion vehicle kilometres), 1994 – 2003	A56
A4-6:	Road Casualty Rates (Fatalities and Injuries per billion vehicle-kilometres) by Province/Territory, 2002 and 2003	A57
A4-7:	Motor Vehicle Occupant Fatalities and Seat Belt Wearing Rates, 1988 – 2003	A57
A4-8:	Percentage of Fatally Injured Drivers Tested and Found to Have Been Drinking (BAC > 0 mg%) and the Number of Persons Charged with Impaired Driving Offences, 1987 – 2002	A57
A4-9A:	Commercial and Other Vehicles Involved in Fatal Collisions by Vehicle Type, 1999 – 2003	A57
A4-9B:	Fatalities Resulting From Commercial and Other Vehicles Involved in Fatal Collisions by Vehicle Type, 1999 – 2003	A58
A4-10:	Fatalities by Road User Class, 1999 – 2003	A58
A4-11:	Vehicles Involved in Fatal Collisions by Vehicle Type, 1999 – 2003	A58
A4-12:	Marine Occurrences, 1999 – 2004	A59
A4-13:	Marine Occurrences by Region, 1999 – 2004	A60
A4-14:	Small Canadian Vessels Engaged in Fishing Activity Marine Occurrences, 1999 – 2004	A61
A4-15:	Small Canadian Vessels Engaged in Commercial Activity Marine Occurrences, 1999 – 2004	A61
A4-16:	Aviation Occurrences and Casualties Involving Aircraft Operating Under CARS, 1999 – 2004	A62
A4-17:	Summary of Aviation Occurences Reported to the Transportation Safety Board, 1999 – 2004	A63
A4-18:	Canadian-Registered Aircraft Accident Rates for Aircraft Operating Under CARS, 1999 – 2004	A64
A4-19:	Accidents Involving Aircraft Operating Under CARS, by Province, 1999 – 2004	A65
A4-20A:	Reportable Accidents Involving Dangerous Goods by Mode and Phase of Transport, 1999 – 2004	A66
A4-20B:	Deaths and Injuries Caused by the Dangerous Goods at Reportable Accidents Involving Dangerous Goods, 1999 – 2004	A66
A4-20C:	Total Deaths and Injuries at Reportable Accidents Involving Dangerous Goods, 1999 – 2004	A66

6. Rail Transportation

A6-1:	Railway Rationalization by Province, 1990 – 2004	A67
A6-2:	Railway Rationalization by Province, 2004	A67
A6-3:	Railway Revenues, 1993 – 2003	A68
A6-4:	Railway Employment, 1993 – 2003	A68
A6-5:	Railway Fuel Consumption, 1993 – 2003	A68
A6-6:	Revenue Tonne-Kilometres by Railway Sector, 1993 – 2003	A69
A6-7:	Traffic Received and Forwarded by Canadian-Based Class II Carriers, 1996 – 2003	A69
A6-8:	Tonnage Carried by Railway Sector, 1993 – 2003	A69
A6-9:	Annual Railway Car Loadings by Commodity, 1995 – 2004	A70

	Title	Page
A6-10:	Volume of Rail Exports and Imports by Commodity, 1996 – 2004	A72
A6-11:	Value of Rail Exports and Imports by Commodity, 1996 – 2004	A72
A6-12:	Volume of Rail Exports by Province of Origin, 1996 – 2004	A73
A6-13:	Value of Rail Exports by Province of Origin, 1996 – 2004	A73
A6-14:	Volume of Rail Imports by Province of Clearance, 1996 – 2004	A73
A6-15:	Value of Rail Imports by Province of Clearance, 1996 – 2004	A74
A6-16:	Volume of Major Commodities Exported by Top Three Provinces of Origin, 1996 – 2004	A74
A6-17:	Volume of Major Commodities Imported by Top Three Provinces of Clearance, 1996 – 2004	A75
A6-18:	Value of Major Commodities Exported by Top Three Provinces of Origin, 1996 – 2004	A75
A6-19:	Value of Major Commodities Imported by Top Three Provinces of Clearance, 1996 – 2004	A76
A6-20:	Volume of Rail Exports by Port Cleared, 1996 – 2004	A76
A6-21:	Value of Rail Exports by Port Cleared, 1996 – 2004	A76
A6-22:	Volume of Rail Imports by Port Cleared, 1996 – 2004	A77
A6-23:	Value of Rail Imports by Port Cleared, 1996 – 2004	A77
A6-24:	Rail Marine Exports and Imports, 1996 – 2003	A77
A6-25:	Rail Marine Exports by Place of Origin, 1996 – 2003	A77
A6-26:	Rail Marine Exports by Commodity, 1996 – 2003	A78
A6-27:	Rail Marine Imports by Destination, 1996 – 2003	A78
A6-28:	Rail Marine Imports by Commodity, 1996 – 2003	A78
A6-29:	Passenger and Passenger-Kms for VIA Rail and Class II Carriers, 1996 – 2003	A79
A6-30:	Commuter Rail Passengers in Toronto, Montreal, and Vancouver, 1994 – 2003	A79

7. Road Transportation

A7-1:	Canada's Road Network	A80
A7-2:	Federally funded ITS Projects, 2004	A80
A7-3:	Annual Trucking Bankruptcies by Region, 1990 – 2004	A81
A7-4:	Distribution of Total For-Hire Trucking Revenues by Size of Carrier, 1991 – 2003	A81
A7-5:	Total Revenues by Urban Transit Operators, 1996 – 2003	A81
A7-6:	Long-Term Trends in Urban Transit — Passengers Carried & Vehicle-Kilometres, 1982 – 2003	A82
A7-7:	Urban Transit Fleet Composition, 1996 – 2003	A82
A7-8:	Intercity and Urban Transit Passengers Carried in The Bus Industry, 1985 – 2003	A83
A7-9:	Total For-Hire Truck Traffic Annual Tonne-Kilometres, 1988 – 2003	A83
A7-10:	For-Hire Truck Traffic by Sector and Province, 2003	A83
A7-11:	For-Hire Trucking International Traffic by Major Flows and Province, 2003	A84
A7-12:	For-Hire Trucking Interprovincial Traffic by Major Flows, 2003	A84
A7-13:	For-Hire Trucking Traffic by Sector and Commodity Group, 2003	A84
A7-14:	Twenty Largest Border Crossings for Trucks, 2000 – 2004	A85
A7-15:	Twenty Largest Border Crossings for Cars/Other Vehicles, 2000 – 2004	A85

8. Marine Transportation

A8-1:	Number of Port Sites Under the Control and Administration of Transport Canada by Province, 1996 – 2004	A86
A8-2:	Divestiture Status of Transport Canada Regional/Local and Remote Ports	A86
A8-3:	Canada Port Authorities Financial Profiles, 2003	A87
A8-4:	CPA Financial Comparison, 2002 and 2003	A88
A8-5:	Financial Results of Major Ports, 1999 – 2003	A88
A8-6:	Financial Results for Transport Canada Ports, 1999/2000 – 2003/2004	A88
A8-7:	Total Tonnage Handled in Canada's Port System, 2001 – 2002	A88
A8-8:	Total Pilotage Assignments and Assignments Per Pilot, 1998 – 2004	A89
A8-9:	St. Lawrence Seaway Cargo Movements, 1990 – 2004	A89
A8-10:	St. Lawrence Seaway Traffic by Commodity, 1993 – 2004	A89
A8-11:	Overview of Major Ferry Services	A90
A8-12:	International Cruise Ship Traffic at Major Canadian Ports, 1992 – 2004	A92
A8-13:	Canada's Marine Traffic Statistics by Sector, 1986 – 2003	A92
A8-14:	Share of Tonnage Carried by Foreign-Flag Ships in the Canadian Coasting Trade, 1988 – 2003	A92
A8-15:	Conference/Non-Conference Shares of Canadian Liner Trade, 1994 – 2003	A92
A8-16:	Canada's Maritime Trade with the United States, 1986 – 2003	A92
A8-17:	Canada's Overseas Maritime Trade, 1986 – 2003	A92
A8-18:	Total Marine Imports/Exports by Commodity, 2003	A93

	Title	Page
9.	**Air Transportation**	
A9-1:	Airport Authorities Financial Performance, 2003	A94
A9-2:	Airport Capital Assistance Program Expenditures by Province, 1995/96 – 2004/05	A95
A9-3:	Airports Capital Assistance Program – Projects Approved in 2004	A96
A9-4:	Airport Improvement Fees at National Airport System (NAS) Airports, 2004	A97
A9-5:	Foreign Airlines Providing International Scheduled Services to and from Canada as of December 31, 2004	A98
A9-6:	Local Service Airlines Providing Scheduled Air Services as of December 31, 2004	A99
A9-7:	Licence Authorities Held as of December 31, 2004	A99
A9-8:	Summary of Personnel Licences and Permits as of September 2004	A99
A9-9:	Personnel Licences and Permits by Province, as of September 30, 2004	A100
A9-10:	Profile of the Recreational Aviation Fleet as of December 31, 2004	A100
A9-11:	Volume of Goods Carried by Canadian Air Carriers by Sector, 1993 – 2003	A100
A9-12:	Operating Goods Revenues of Canadian Air Carriers by Sector, 1993 – 2003	A100
A9-13:	Value of International Goods Shipped by Air, 1998 – 2004	A100
A9-14:	Air Exports and Imports by World Region, 2003 and 2004	A101
A9-15:	Canada's Air Merchandise Trade — Top 25 Partners, 2004	A101
A9-16:	Main Commodity Groups Shipped by Air in Canada's International Trade, 2003 and 2004	A102
A9-17:	Enplaned/Deplaned Revenue Passengers, 2003	A102
A9-18:	Changes to Domestic Scheduled Air Services in 2004	A103
A9-19:	Changes to Transborder Scheduled Air Services in 2004	A103
A9-20:	Changes to International Scheduled Air Services in 2004	A104
A9-21:	Average Scheduled Daily Seat-Kilometres by Airline, Domestic Sector, December 2003 and 2004	A104
A9-22:	Average Scheduled Daily Seat-Kilomtres by Region, Domestic Sector, December 2003 and 2004	A105
A9-23:	Competition in Domestic Air Markets as of December 31, 2004	A106

List of Addendum Figures

	Title	Page
6.	**Rail Transportation**	
A6-1:	CN and CPR Intermodal Traffic, 1996 – 2003	A71
A6-2:	Origin and Destination of CN and CPR North American Intermodal Traffic, 1996 – 2003	A71
A6-3:	Segment Share of Rail Intermodal Traffic, 1996 – 2003	A71
A6-4:	CN and CPR Container-On-Flat-Car and Trailer-On-Flat-Car Growth, 1996 – 2003	A71

REPORT HIGHLIGHTS

TRANSPORTATION AND THE ECONOMY

- In 2004, the Canadian economy fared better than in 2003, growing by 2.8 per cent in real terms.
- Exports, consumer expenditures and business investment all contributed to this economic growth.
- In the second half of the year, the high Canadian dollar took its toll on exports, spurred imports and slowed economic growth.
- The rise of the dollar, by an average of 7.7 per cent in 2004 against the U.S. dollar, reflected a decline of the value of the U.S. dollar and an increase in commodity prices.
- The value of the Canadian dollar dropped from US$0.788 in January to US$0.714 in May before rising to a 12-year high of US$0.851 in November.
- The Consumer Price Index (CPI) increased by 1.9 per cent in 2004. Energy and transportation prices rose by 6.8 and 2.4 per cent, respectively.
- In real terms, personal disposable income per capita increased by 1.5 per cent.
- Canada's population grew by 0.9 per cent, while employment increased by 1.8 per cent.
- All provinces and territories, except Newfoundland and Labrador, showed economic growth. Western Canada and Ontario fared better than Quebec and eastern Canada.
- Canada's trade increased by 6.5 per cent with the United States, 13.4 per cent with the European Union and 38.8 per cent with China (4.7 per cent with Japan).
- Trucking accounted for 62 per cent of trade with the United States, rail 18 per cent, pipeline 11 per cent, air six per cent and marine three per cent.
- Almost 76 per cent of the trade (in value terms) between Canada and the United States carried by trucks took place at six border crossing points: Windsor/Ambassador Bridge, Fort Erie, Sarnia and Lansdowne in Ontario, Lacolle in Quebec, and Pacific Highway in British Columbia.
- In 2004, Canada's trade with countries other than the United States totalled $209 billion. Imports were more significant than exports and, in terms of both value and volume, marine and air transportation were the two dominant modes for this trade.
- Of Canada's top 20 trade partners in 2004, five countries had a two-digit average annual growth rate in their trade with Canada over the 1994 to 2004 period.
- In 2004, China ranked second ($24.1 billion) and fourth ($6.6 billion) respectively in terms of Canada's total imports and exports.
- Tourism expenditures, including expenditures on transportation, were up in 2004. Tourism recovered from being adversely affected in 2003 by several factors including the SARS (Severe Acute Respiratory Syndrome) outbreak. Air transportation expenditures rose 9.4 per cent. Both interprovincial and intraprovincial domestic travel were up in 2004.
- Road energy use increased by 3.2 per cent in 2003 — the only mode that used more energy than the year before. Pipelines used 15.2 per cent less energy, while marine and rail used 6.9 and 0.3 per cent less, respectively.
- Productivity in transportation grew marginally, by 0.3 per cent, in 2003 while freight transportation prices increased by 1.8 per cent.
- In 2004, commercial transportation services accounted for 4.1 per cent of Canada's value-added gross domestic product (GDP). In 2003, in relation to provincial/territorial GDP, the importance of transportation was most significant in Manitoba, British Columbia and New Brunswick. Ontario and Quebec contributed 57.8 per cent of

commercial transportation activity nationally under GDP, while Alberta and British Columbia contributed 28.4 per cent.

- Investment in transportation accounted for 2.6 per cent of Canada's GDP in 2004.
- Overall transportation-related final demand accounted for 12.5 per cent.

GOVERNMENT SPENDING ON TRANSPORTATION

- In fiscal year 2003/04, all levels of government combined spent $19.7 billion on transportation expenditures net of transfers, $0.2 billion more than in 2002/03. Federal and provincial government expenditures increased while local government spending declined marginally.
- In 2003/04, all government levels collected $15.3 billion in permit and licence fees and fuel taxes from transport users, three per cent more than the previous year.
- In 2003/04, direct federal transport expenses are expected to be $2 billion, up 8.2 per cent over 2002/03. The federal government continued to spend more on safety, security and policy activities in 2003/04.
- In 2004/05, total direct federal subsidies, grants and contributions are expected to grow to $856 million, 6.0 per cent more than in 2003/04.
- Provincial, territorial and local governments spent $17.0 billion on transportation in 2003/04, roughly 0.6 per cent more than in 2002/03. About 78 per cent of this went to highways and roads.
- In 2003/04, governments spent $13.6 billion on roads and $2.9 billion on public transit services. Federal and provincial governments spent $2.2 billion on air, marine and rail transportation.

TRANSPORTATION SAFETY AND SECURITY

- A recent public opinion survey indicated that in the case of all four transportation modes, over 90 per cent of Canadians give transportation in Canada either a *moderately* or a *very safe and secure* rating.
- In 2004, Transport Canada maintained its regulatory and safety oversight responsibilities, implemented a number of improvement initiatives and continued the implementation of Safety Management Systems in the air, rail and marine industries. In 2004, compared to 2003, there was a decrease in the number of aviation and marine transportation accidents. There were also fewer air and road transportation fatalities, however, there was an increase in both marine and rail transportation fatalities.
  - Rail-related accidents increased by 9.3 per cent in 2004, while rail-related fatalities jumped from 77 in 2003 to 99 in 2004. Two-thirds of these fatalities were due to a 52 per cent increase in the number of trespasser accidents. Crossing accidents at both public automated crossings and public passive crossings fell.
  - In 2003 (latest data), there was a two per cent decrease in road casualty collisions, a 5.6 per cent decrease in road-related fatalities and a 2.5 per cent decrease in road-related injuries.
  - There were 431 Canadian vessel accidents in 2004, down from 485 in 2003. As in previous years, the majority of marine accidents were shipping accidents. A total of 27 lives were reported lost in 2004, slightly more than the previous five-year average of 23. A record low of confirmed vessel losses (17) was reported. Fishing vessels accounted for 54 per cent of the total reported marine accidents, while commercial vessels accounted for 35 per cent.
  - There were 244 Canadian-registered aircraft involved in a reported 241 accidents in 2004; of these, 104 involved commercially operated aircraft, while the remaining 140 accidents were associated with recreational aviation. None of the three accidents involving Canadian airlines and none of the four accidents involving commuter aircraft resulted in fatalities.
  - In a context of approximately 30 million shipments of dangerous goods a year, a total of 379 accidents in the transportation of dangerous goods were reported in 2004, slightly more than the 356 of 2003. Also in 2004, 11 fatalities and 35 injuries resulted from accidents involving dangerous goods; of these, 12 injuries and one fatality were directly associated to the dangerous goods themselves.
- Transportation security remains one of Transport Canada's key priorities. In 2004, Transport Canada continued to take action to further strengthen transportation security in all modes. This has contributed significantly to a continued increase in the public confidence ratings of the security of the transportation system.
  - Important aviation security initiatives in 2004 included: legislative and regulatory enhancements; programs such as the Cabin Security Enhancement Contribution Program and the Aviation Transportation Security Clearance program; awareness campaigns, industry training initiatives, and international initiatives.

- Transport Canada made significant progress toward the enhancement of marine security. The Marine Security Regulations came into force on July 1, 2004, putting the International Ship and Port Facility Security (ISPS) Code into effect in Canada.
- Efforts related to rail security were stepped up following the March 2004 train bombings in Madrid, Spain. The security of containerized cargo moving intermodally and internationally has become a major transportation security concern internationally. In 2004, a Canada-U.S. Working Group worked on a joint Cargo Security Project.
- In 2004, Transport Canada continued to enhance its ability to prepare for and respond to emergencies and crises.
- Transport Canada continued to implement the Chemical, Biological, Radiological, and Nuclear Response (CBRN) Project for the transportation of dangerous goods.

TRANSPORTATION AND THE ENVIRONMENT

- In 2002, 26 per cent of greenhouse gas (GHG) emissions in Canada came from the transportation sector: 72 per cent from road transportation, seven per cent from aviation, three per cent from rail and three per cent from marine. Off-road and pipelines accounted for the remaining 15 per cent of total transportation-related GHG emissions.
- Between 1990 and 2002, on-road GHG emissions and activity levels from the passenger and freight sectors increased by roughly 12 per cent, with activity levels and GHG emissions tracking each other.
- Over the same period:
  - on-road freight GHG emission levels increased by 53 per cent, compared with a 103 per cent increase in road freight transport activity;
  - aviation GHG emissions grew by 18 per cent;
  - rail emissions dropped by about 16 per cent, despite a 28 per cent traffic growth; and
  - marine emissions increased by three per cent.
- The transportation sector accounts for 60 per cent of total emissions of nitrogen oxides (NO_x), 26 per cent of volatile organic compounds (VOC), seven per cent of fine particulate matter (PM) and four per cent of sulphur oxides (SO_x). Since 1990, overall emissions of all these pollutants has declined.
- A number of new federal transportation-related initiatives were introduced in 2004:
  - The One-Tonne Challenge, a campaign aimed at providing Canadians with information and tools to reduce their own GHG emissions by one tonne, including emissions related to travelling
  - The announcement of the Hydrogen Highway, an initiative to stimulate the development and commercialization of hydrogen and fuel cell technologies
  - The Urban Transportation Showcase Program, an initiative to demonstrate and evaluate the impacts of integrated strategies for reducing GHG emissions, air pollution, congestion, urban form and land use and increased active transportation
  - Federal and provincial announcements of investments in public transit; the New Deal for Cities and Communities announced in the Speech from the Throne; and a national urban transit bus retrofit program
  - The Advanced Technology Vehicles Program, aimed at reducing GHG emissions in the transportation system
  - The Freight Efficiency and Technology Initiative, aimed at reducing the growth of GHG emissions from freight transportation
  - Proposed amendments to the Sulphur in Diesel Fuel Regulations to introduce limits in off-road, rail and marine diesel fuels aligned with the levels adopted by the U.S. Environmental Protection Agency in June 2004
  - Proposed Off-Road Compression-Ignition Engine Emission Regulations to introduce emission standards for diesel engines starting in 2006

RAIL TRANSPORTATION

- The rail system network was relatively stable in 2004. The only track discontinuances were made by Canadian Pacific Railways (129 kilometres) and Southern Manitoba Railway (about 100 kilometres).
- Approximately 2,300 kilometres of track were transferred as a result of the completed takeover by CN of BC Rail. The only other transfer was between Burlington Northern Santa Fe and the newly formed Kettle Falls International Railway, which involved nine kilometres of track.

- Of total rail revenues in 2003, 89 per cent were generated by CN, Canadian Pacific Railway (CPR) and VIA Rail.
- Class I railways consumed 1.8 billion litres of fuel in 2003, the same as in 2002 but less than in 1990, when they used 1.9 billion litres.
- CN reported a four per cent decrease in revenue tonne-kilometres in 2003, while CPR's output increased by almost 7.5 per cent.
- In 2004, rail car loadings increased five per cent to reach 273 million tonnes. In western Canada, volumes moved by rail increased nine per cent, while in eastern Canada, volumes stayed at 133 million tonnes moved.
- Shipments of coal and coke increased by four per cent in 2004, chemicals increased 11 per cent to 16 million tonnes, iron ore decreased by 15.4 per cent (due a strike by iron ore workers), and forest products totalled 45.3 million tonnes. Grain shipments totalled 27.5 million tones, still below the volumes reported in the 1990s, while rail shipments of fertilizer materials increased by 11 per cent, and automotive products fell slightly to 5.1 million tonnes.
- Export rail tonnage increased eight per cent in 2004 to reach 76.5 million tonnes; forest products and chemicals were the largest contributors to this increase. The largest share of rail export volume to the United States originated in Ontario (25 per cent).
- In 2004, import rail tonnage increased slightly to 21.7 million tonnes. Imports of chemicals and metals increased. Automotive imports fell slightly to 5.1 million tonnes, a level still above the 4.1 million tonnes average for the period 1996 – 2004.
- Fort Frances and Sarnia, both in Ontario, accounted for 19.5 and 16.8 per cent of rail-exported trade, respectively. Forest products and chemicals were the major commodities exported at these border crossings. In terms of value, the leading border crossing points were Sarnia and Windsor, with automotive products topping the commodities exported through these locations.
- Class I railways moved 83 million tonnes of goods to and from Canadian ports in 2003, up from 82 million in 2002.
- British Columbia and Alberta experienced declines in rail–marine exports in 2003, Saskatchewan enjoyed increased exports. Coal and grain exports both declined, but exports of other agricultural and food products experienced the largest increase. Rail–marine imports increased slightly in 2003, and Quebec and Ontario remained the two major destinations for such traffic.
- Intercity rail passenger traffic decreased slightly in 2003. VIA Rail reported 4.8 per cent fewer passengers carried.
- The productivity of rail freight carriers increased by 2.4 per cent in 2003, while VIA Rail's productivity declined by 8.7 per cent.

ROAD TRANSPORTATION

- In 2004, a consensus was reached to limit commercial vehicle drivers to 13 hours of driving and 14 hours on duty per 24-hour period.
- Three changes to the weights and dimensions standards of trucks and buses were introduced in 2004: a change to the overall box length on a truck, a limit on the placement of the kingpin for the second trailer in a "B-train double-trailer" truck configuration, and the shift of recreational vehicles from the "straight truck" to the "intercity bus" category.
- In 2004, British Columbia's *Passenger Transportation Act* came into force.
- Heavy trucks crossing the Canada–U.S. border increased almost two per cent in 2004.
- TransForce Income Fund topped the list of for-hire trucking companies in Canada for total number of vehicles (tractors/trailers) in their fleet.
- Trucking firms carrying general freight accounted for 62.5 per cent of total revenues of large for-hire trucking firms in 2003, while the share of specialized trucking firms increased marginally.
- According to the 2003 Canadian Vehicle Survey, there are 17.5 million (in scope) light vehicles (i.e. gross weight less than 4,500 kilograms) in Canada, including 11.1 million passenger cars and station wagons, 2.2 million vehicles listed as vans, 2.7 million pickup trucks and 1.5 million sport utility vehicles (SUVs).
- Vans, SUVs and light trucks accounted for 39.9 per cent of vehicle-kilometres in 2003. They were driven on average more than cars and station wagons (17,900 versus 15,400 kilometres) and had a marginally higher vehicle occupancy ratio (1.68 persons).
- There was an average of 550 vehicles per 1,000 people in Canada in 2003.
- According to the Canadian Vehicle Survey, there were 600,000 (in scope) heavy trucks (gross weight of at least 4,500 kilograms) in Canada, of which 322,000 were medium-sized, weighing between 4,500 and 15,000 kilograms. Almost 279,000 were Class 8 (heavy) trucks, weighing more than 15,000 kilograms.

- Ontario (37 per cent), Alberta (24 per cent) and Quebec (13 per cent) accounted for 74 per cent of the heavy truck fleet.
- Heavy trucks accounted for 18 billion vehicle-kilometres in 2003, compared with fewer than 6.2 billion for medium-sized trucks.
- Empty haul movements accounted for 13 per cent of heavy truck vehicle-kilometres in 2003, compared with about five per cent for medium-sized trucks.
- In 2003, domestic and transborder for-hire truck traffic by Canadian firms generated revenues of $8.8 billion and $8.0 billion, respectively, with six groups of commodities accounting for 82 per cent of these revenues: manufactured products, food products, forest products, metal and steel products, automobile/transport products and plastic/chemical products.
- Ontario dominated with 36 per cent of intraprovincial trucking traffic, 34 per cent of interprovincial trucking traffic and 45 per cent of total transborder traffic hauled by trucks. The heaviest traffic flows were between Ontario and the U.S. central region and Ontario and the U.S. southern region, with 19.3 billion and 12.7 billion tonne-kilometres, respectively.
- Total factor productivity in the trucking industry fell by 0.9 per cent in 2003.
- In 2003, the average operating ratio of the trucking industry reached 94.9 per cent, slightly higher than the average ratio of 94.4 recorded for the 1998 – 2002 period.
- The revenues of urban transit operators increased by 4.6 per cent in 2003. Overall, total transit output in Canada increased by 1.8 per cent, while prices rose by 2.8 per cent.
- In 2003, total factor productivity of transit systems increased by 0.5 per cent.

MARINE TRANSPORTATION

- The National Marine and Industrial Council — an industry–government forum — was established to enhance dialogue between the federal government and the marine industry, to promote linkages and coordination on marine sector initiatives, and to provide cohesiveness across a core group of federal departments with mandates and interests in marine transportation.
- By 2004 year-end, 92 regional/local and remote ports and port facilities remained under Transport Canada's control.
- Total operating revenues of Canada Port Authorities (CPA), which are financially self-sufficient ports critical to domestic and international trade, reached $299 million in 2003, up nine per cent from 2002 ($275 million). Vancouver and Montreal accounted for roughly 57 per cent of this total.
- Tonnage handled at CPA ports increased from 215 million tonnes in 2002 to 227 million tonnes in 2003, with five CPAs accounting for 69 per cent of this volume (Vancouver, Saint John, Sept Îles, Montreal and Quebec City).
- In 2003, CPAs handled 51 per cent of total port traffic.
- Of all fishing harbours, 679 were managed by harbour authorities at the end of 2004, while 328 were small craft harbours managed by the Department of Fisheries and Oceans Canada.
- Three of the four pilotage authorities experienced a deficit in 2004, representing a loss exceeding $5 million, compared with a positive balance in 2003.
- The Canadian Coast Guard's net expenditures in 2003/04 were $467.1 million. In 2004, special attention was devoted to the creation of the Canadian Coast Guard as a Special Operating Agency (SOA).
- The two main sections of the St. Lawrence Seaway — the Montreal–Lake Ontario section and the Welland Canal section — attracted an estimated 43 million tonnes of traffic in the 2004 season, 5.3 per cent more than in 2003.
- Ferry services carried an estimated 38.8 million passengers and 16.3 million vehicles in 2004.
- In 2004, international cruise ship traffic decreased at Vancouver but increased at the four eastern Canada ports served by cruise ships, Montreal, Quebec City, Halifax and Saint John.
- Domestic cargo loaded and unloaded at Canadian ports increased to 136.4 million tonnes in 2003, up nine per cent from 2002.
- In 2003, 306.6 million tonnes of international cargo was handled at Canadian ports, compared with 282.7 million tonnes in 2002. Of this total, 123.5 million tonnes were related to Canada's marine traffic to and from the United States, up slightly from 2002, while 183.2 million tonnes had to do with Canada's marine trade with overseas countries (excluding the United States).
- The value of Canadian international marine trade in 2003 was $107.4 billion, excluding shipments via U.S. ports, a 4.1 per cent increase from 2002.

AIR TRANSPORTATION

- Air Canada successfully emerged from bankruptcy protection in 2004.
- The federal government tasked the Standing Committee on Transport to conduct a review on whether Canada should further liberalize its approach to the economic regulation of air transportation.
- The Air Travel Complaints Commissioner issued two reports in 2004 covering the year 2003, citing a declining number of complaints.
- In 2004, studies were conducted on the value of the leased National Airport System airports, the impact of airport rent on the air sector and the travelling public, and the fairness and equity of the current rent model.
- A study of the financial viability of regional and small airports transferred since the introduction of the National Airports Policy was completed in 2004.
- Amendments to regulations of the computer reservation systems were published in the *Canada Gazette*, Part II leading to a more deregulated system that recognizes the importance of such changes as the emergence of the Internet as an information and sales tool.
- The Air Travellers Security Charge, introduced to fund the costs of the enhanced air travel security system put in place after the September 11, 2001, terrorist attacks, was reduced on April 1, 2004, to $6 each way for air travel within Canada, $10 for transborder travel and $20 for other international travel. Effective March 1, 2005, it was further reduced to $5 for one-way domestic travel, to $8.50 for transborder travel and to $17 for other international air travel.
- In 2004, the federal government continued to provide the short-term indemnification for third-party war and terrorism liabilities (renewable for periods of 90 days) it initiated after international insurers withdrew their previous level of coverage on September 22, 2001.
- The Canada–U.S. Air Transport Preclearance Agreement was extended in December 2004 to Halifax International Airport.
- Several new designations were announced by the Minister of Transport in 2004 as part of the new multiple designation policy allowing all carriers to operate scheduled international air services to any air market, regardless of size: Air Canada (extension of its temporary designation to Grenada), Air Transat (Toronto–Manzanillo (Mexico) and Winnipeg–Puerta Vallarta), Zoom Airlines (Ottawa–Puerto Vallarta) and Canjet (Dominican Republic).
- Canada participated in seven rounds of negotiations with five countries in 2004 and held consultations with 14 other countries. An amended agreement was concluded with the Russian Federation, and an agreement expanding operating opportunities between Canada and Japan. Temporary arrangements were reached with the Republic of Columbia, Israel and Singapore as was an arrangement with Brazil. New tariff regimes were put in place with Barbados, St. Kitts, Saint Lucia and Trinidad and Tobago.
- In 2004, the Airports Capital Assistance Program funded 42 projects at 35 airports related to safety, asset protection and operating cost reduction.
- Despite the decline in passenger traffic in 2003 caused by the SARS outbreak, total revenues of the two busiest Canadian airports increased by 8.5 per cent.
- Air Canada, with its subsidiaries, remained Canada's largest airline in 2004, with $7.6 billion in revenues between October 1, 2003, and September 30, 2004, and serving 21 points in Canada, 30 in the United States and 54 internationally. The Air Canada family of companies includes Jazz operating on less busy domestic and transborder routes; Air Canada Vacations offering tour packages, and Jetz offering premium charter services to sport teams and businesses. Three independent local service operators offered regional services on behalf of Air Canada: Air Georgian, Air Labrador and Central Mountain Air.
- Low-cost, no-frills carriers offering domestic and transborder services in 2004 included WestJet, CanJet and Jetsgo.
- Canadian leisure carriers providing international services to leisure destinations in 2004 included Air Transat, Skyservice Airlines, Harmony Airways and Zoom Airlines.
- Airlines providing year-round scheduled and charter services across northern Canada included First Air, Canadian North and Air North. Aklak Air, Kenn Borek Air and North-Wright Airways complement the other airlines by offering flights to the most remote communities in the Arctic.
- Twenty-three U.S. airlines served 18 Canadian cities, and 37 foreign airlines provided services from Canada to 51 international destinations in 31 countries.
- A number of all-cargo airlines provided jet service in 2003 on behalf of Canada Post, courier companies, freight forwarders, consolidators and shippers: All-Canada Express, Cargojet Canada, Kelowna Flightcraft and Morningstar Air Express.

- At the end of 2004, more than 2,360 airline licences were active, an indication of the wide number of airlines operating in Canada.
- The business segment of air activity continued to grow in 2004, mainly as a result of fractional ownership.
- In 2003, the total revenues generated by the air transport industry dropped by 12 per cent, while productivity increased by 1.3 per cent in 2003.
- Canada's air trade with countries other than the United States increased significantly in 2004.
- The number of tonnes carried by Canadian air carriers decreased by 18 per cent in 2003.
- Air passenger traffic in 2004 was nearly equal to the 2000 peak level, with 60 million passengers. Transborder traffic grew by 10 per cent and other international by 18 per cent.

INTRODUCTION 1

The state of transportation in Canada is presented in the 2004 Annual Report using the most current information available.

The *Canada Transportation Act* (1996) places a statutory responsibility on the Minister of Transport to table every year an annual report on the state of transportation in Canada. Section 52 of the Act defines the mandate and the nature of the responsibilities and requirements of the annual report:

"Each year the Minister of Transport shall, before the end of May, lay before Parliament a report briefly reviewing the state of transportation in Canada in respect of the preceding year, including:

(a) the financial viability of each mode of transportation and its contribution to the Canadian economy and the development of the regions;

(b) the extent to which carriers and modes of transportation were provided resources, facilities and services at public expense;

(c) the extent to which carriers and modes of transportation received compensation, indirectly or directly, for the resources, facilities and services that were required to be provided as an imposed public duty; and

(d) any other transportation matters the Minister considers appropriate."

The 2004 annual report, an overview of transportation in Canada, is the ninth submitted by the Minister since the Act came into force. The most recent available data and information were used to produce the report. Therefore, it is not always 2004 data that are reported. The scope of the report is not restricted to federal transportation responsibilities. While urban and intermodal transportation matters receive limited coverage, the report offers nevertheless a broad comprehensive coverage of the country's transportation system.

As for recent previous years, an addendum to this report is posted on Transport Canada's Web site. The Addendum contains more detailed information on the subject matters covered in the overview. Since the 2002 Annual Report, the scope of the coverage of the report has been maintained through the use of the Addendum, despite a more concise review of the state of transportation in Canada. Readers interested in more detailed and/or time series information are invited again this year to consult the Addendum at www.tc.gc.ca. Individual references to the Addendum are found either in the text or in footnotes to the text or to tables and figures. Information contained in tables or used to produce figures in the 2003 report have been updated in the report itself or can be found in tables in the Addendum. In addition, all annual reports since 1996 are available on Transport Canada's Web site at www.tc.gc.ca.

Canada's economy is a complex system that involves the production, distribution and consumption of commodities — both material goods and services. The country's economic well-being depends on the ability to span distances using transportation services, on dynamic trade relationships with other nations, and on the ability to compete in a global marketplace. Canada's economy is one of the strongest and healthiest among leading industrial countries.

1 INTRODUCTION

Transportation has an important role to play in enhancing the well-being of Canadians, by attracting the right investments and by creating conditions favourable to growth. Transportation opens markets to natural resources, agricultural products and manufactured goods, it supports service industries and mitigates the challenges presented by topography. Transportation links communities and reduces the effects of the distances that separate people. Canada's prosperity is closely linked to its relationships with other countries, particularly with the United States. The two countries share the longest undefended border in the world and exchange nearly $1.8 billion in goods and services daily. A more global economy is rapidly developing with the expansion of the European Union and with emerging economies such as China, India and Brazil assuming increasingly important roles in trade. Transportation has to evolve with economic globalization and integration and adjust to the changes in both the domestic and global landscapes.

The needs of all sectors of the economy drive the demand for transportation services. To provide the proper context, this overview of the state of transportation begins with a review of the performance of the Canadian economy (Chapter 2). Detailed information related to employment, trade and tourism can be found in the Addendum along with detailed information on transportation energy consumption.

Chapter 3 addresses the Section 52 (b) requirement related to the statutory mandate for the annual report by presenting the most recent information on government transportation spending and revenues. Some of the government transportation spending is directed at specific transportation system infrastructure assets. The private sector expenditures on and investments in Canada's transportation system are not covered in this chapter. The focus on the public sector does not reflect all transportation expenditures and investments.

Chapter 4 reviews safety and security in the transportation system. A safe transportation system remains a fundamental priority for Canada. This chapter provides an up-to-date overview of the most recent accidents and incidents statistics by mode. Recent enhancements to security are also reviewed.

Chapter 5 covers transportation and the environment. A review of environmental trends in transportation is followed by a description of the initiatives of the different levels of government relating to transportation and the environment.

Chapters 6 to 9, using a modal approach, give the most recent information on transportation. For rail (Chapter 6), marine (Chapter 8) and air transportation (Chapter 9), the coverage is structured as follows: special events in 2004, infrastructure, industry structure, freight and passenger transportation activity levels, and, where applicable, intermodalism and performance. All road-related transportation is regrouped in Chapter 7, with coverage of the same subject matters as found in the three modal chapters.

Most of the data used and presented in this report or in the Addendum is from sources external to Transport Canada. The onus for data validation rests with those sources. Proper care and attention to data quality and limitations was given during the production of this report, and footnotes are used where needed to flag issues and explain data limitations. Given the constraints of the statutory deadlines under which the report was produced, the responsibility for data accuracy rests with the sources used. This report does not attempt to circumvent data limitations by estimating, nor does it attempt to present a prospective view of Canada's transportation system.

TRANSPORTATION AND THE ECONOMY 2

Consumer expenditures and business investment provided strength to the Canadian economy in 2004.

CANADIAN ECONOMIC PERFORMANCE

The Canadian economy fared better in 2004 than in 2003, as real gross domestic product (GDP) at market prices grew 2.8 per cent. This was up from the 2.0 per cent increase of 2002, when it had been affected by the SARS outbreak, the mad cow scare and the increasing value of the Canadian dollar. In the first three quarters of 2004, the economy grew at about three per cent at annual rates. Consumer spending and business investment and exports for the first half of the year all provided strength. Beginning in the third quarter, however, the high dollar took its toll on exports but spurred imports. Overall growth in the economy fell in the fourth quarter to about half that of the first three quarters.

Consumer expenditures continued to provide strength to the economy in 2004, increasing 3.5 per cent in real terms. This reflected continued low interest rates and good employment growth. Retail sales were 5.0 per cent higher than in 2003, when they increased 3.8 per cent. New and used motor vehicle sales, while still high, fell 3.2 per cent, continuing the drop seen in 2003. New housing starts reached a seventeen-year high at 233,000 units. Investment in residential construction increased 8.4 per cent, almost a full percentage point above the 7.5 per cent increase in 2003. Investment in machinery and equipment rose strongly at 9.4 per cent, after increasing 4.5 per cent the previous year. Government spending on goods and services rose 2.5 per cent, while investment by government rose 1.9 per cent. The main weakness in the economy was the trade sector. While exports of goods and services increased 4.9 per cent, reversing the 2.4 per cent drop in 2003, imports also increased 8.2 per cent, compared with only 3.8 per cent in 2003.

Table 2-1 shows general economic indicators in Canada for 2004.

TABLE 2-1: GENERAL ECONOMIC INDICATORS, 2004

	2004	*Percentage change 2003 – 2004*	*Annual percentage change 1998 – 2003*
GDP at Basic Prices (millions of constant 1997 dollars)			
Total Economy	1,047,254	3.1	3.7
Goods	327,205	3.7	2.7
Agriculture	14,220	6.9	(0.8)
Forestry	6,874	5.8	2.9
Mining	38,645	3.1	1.7
Manufacturing	181,230	4.0	3.1
Construction	58,292	3.7	4.8
Services	720,049	2.8	4.1
Retail trade	60,006	4.0	4.9
Transportation	43,279	3.9	3.0
Merchandise Trade (millions of dollars)			
Exports	430,279	7.6	4.1
Imports	362,952	6.2	2.4
Income (dollars)			
Personal Disposable Income per capita	23,202	2.9	3.6
Canadian Dollar (U.S. cents per unit)	76.8	7.7	1.2
Employment (thousands)	15,950	1.8	2.2
Population (thousands)	31,946	0.9	1.0
Prices			
Total Economy (1997=100)	114.8	3.2	2.2
Consumer Price Index (1992=100)			
All Items	124.6	1.9	2.4
Transportation	144.8	2.4	3.3

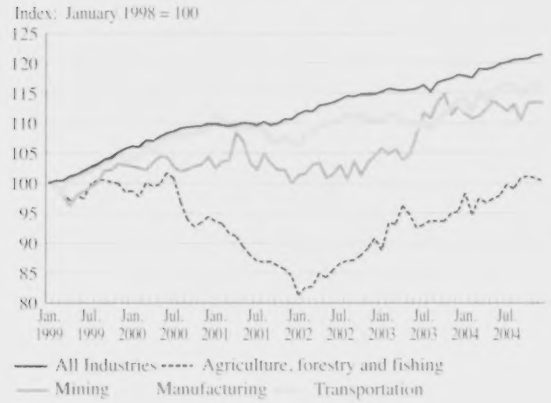
Source: Statistics Canada Cat. No. 11-010, 13-001, 15-001/62-010; Bank of Canada

In 2004, GDP at basic prices by industry grew by 3.1 per cent in real terms. The output of goods-producing industries grew 3.7 per cent, while that of service industries grew 2.8 per cent. Resource-based industries all grew, as agriculture advanced 6.9 per cent, forestry and logging 5.8 per cent, and mining 3.1 per cent. The manufacturing industry recovered from very poor growth in 2003, expanding by 4.0 per cent in 2004, as transportation equipment, machinery and electronic

equipment all showed good gains. The construction industry grew 3.7 per cent and residential construction was very strong at 8.7 per cent growth. The transportation industry grew 3.9 per cent which was similar to the growth of the goods-producing industries.

Figure 2-1 shows the changes in real GDP since 1999.

FIGURE 2-1: REAL GDP BY MAJOR SECTOR, 1999 – 2004

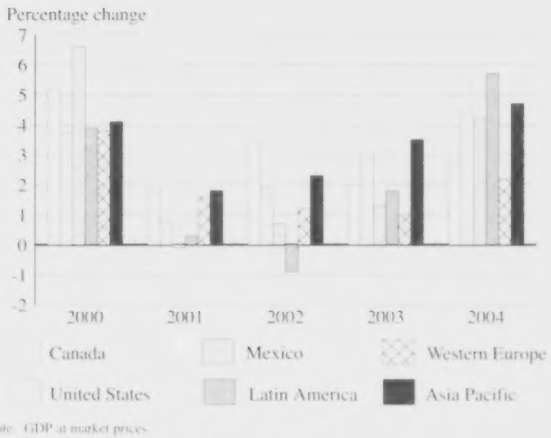


Source: Statistics Canada Cat. No. 15-001

The global economy expanded in 2004. World GDP rose 4.1 per cent, up from the 2.6 per cent increase in 2003. This improved rate of growth was due to the effect of expansionary monetary and fiscal policies in most of the major economies. However, a negative impact of this has been the rise in oil prices. While the depreciation of the U.S. dollar has stimulated the U.S. economy, it has been a drag on economies whose currencies have risen in value. The United States, which had real growth of 4.4 per cent in 2004, has been a major beneficiary of the expansionary policies and of its dollar's decline. All sectors of the U.S. economy showed strength, as consumer spending rose 3.8 per cent, business investment 10.6 per cent, and exports 8.5 per cent. Mexico's economy profited from the strong growth in the U.S. economy, growing 4.2 per cent in 2004, after increasing only 1.3 per cent in 2003. Latin America's economy grew 5.7 per cent, as the Brazilian economy moved out of recession and grew 5.4 per cent. Other countries such as Argentina and Venezuela also had strong growth. Western Europe was again the weakest of the regions with growth of just 2.2 per cent in 2004. However, this was more than double the 1.0 per cent growth in 2003. Germany, France and Italy all had stronger economies in 2004; however, the rise of the Euro dampened exports, and employment and consumer spending remained weak. The United Kingdom had the strongest of Western Europe's major economies, at 3.1 per cent growth. The Asia-Pacific region grew 4.7 per cent in 2004, up from 3.5 per cent in 2003. Japan had its highest growth rate since the mid-1990s, at 2.9 per cent, up from 1.3 per cent in 2003. This growth has been driven by the export sector, particularly to Chinese and U.S. markets. The Chinese economy, which grew 9.5 per cent in 2004, is having a major impact on the world economy, to which it provides low-cost consumer goods and looks abroad for the raw materials needed to fuel its rapid growth.

Figure 2-2 compares Canada's economy to that of other regions from 2000 to 2004.

FIGURE 2-2: REAL GDP: CANADA AND OTHER REGIONS, 2000 – 2004



Note: GDP at market prices.

Source: Global Insight, Statistics Canada Cat. 13-010, U.S. Bureau of Economic Analysis

In 2004, on a balance of payments basis, merchandise exports increased by 7.6 per cent and imports increased by 6.2 per cent. This resulted in a $9.2 billion increase in the trade surplus. Exports to the United States rose 6.5 per cent, 1.8 per cent to Japan and 12.3 per cent to the European Union, while imports increased 4.2 per cent from the U.S. and 4.4 per cent from the European Union but fell 5.8 per cent from Japan.

The value of the Canadian dollar against the U.S. dollar fell in the first part of 2004 from US$0.788 in January to its low for the year of US$0.714 in May. It then rose steeply to reach a 12-year high of US$0.851 in November before closing the year at US$0.832. The average value of the Canadian dollar against the U.S. dollar increased 7.7 per cent in 2004 and follows a 12.1 per cent increase in 2003. This increase reflected a fall in the value of the U.S. dollar and an increase in commodity prices.

As measured by the GDP deflator, general prices in the total economy rose 3.2 per cent in 2004, equal to the increase in 2003. The average all-items consumer price index (CPI) rose only 1.7 per cent in 2004, compared with 2.8 per cent in 2003. Major contributors to this slowdown were automotive vehicle insurance premiums, which rose only 1.5 per cent in 2004 compared with a 22.1 per cent in 2003, and the price of natural gas, which fell 2.1 per cent in 2004 after increasing 30.1 per cent in 2003. Energy prices continued to rise, and consumers paid 6.8 per cent more on average for energy in 2004 after a 7.9 per cent increase in 2003. Transportation prices rose 2.4 per cent compared with 5.2 per cent in 2003.

Per capita disposable income rose 2.9 per cent in 2004, its fastest increase since 2001. In real terms it rose 1.5 per cent. These increases compare to a 2.1 per cent increase in nominal terms and a 0.5 per cent real increase in 2003.

Also in 2004, the average number of persons employed rose to 15.95 million, up 1.8 per cent and following a 2.2 per cent increase in 2003 over 2002. The mid-year population of Canada rose to 31.9 million, up 0.9 per cent from 2003.

Provincial Economic Performance

In 2004, all provinces and territories, except Newfoundland and Labrador, showed some economic growth. Western Canada and Ontario, however, fared better (growth of more than three per cent) than Quebec and Eastern Canada (growth of less than three per cent). High commodity prices helped the West, while manufacturing activity and exports were important in Central Canada. The East had slower activity in the energy sector and in some areas of construction. Newfoundland and Labrador's economic output fell slightly in 2004, as mining was affected by a strike, and offshore oil production declined. Prince Edward Island growth was weak due to difficulties in agriculture and tourism. Nova Scotia was adversely affected by declining natural gas production, but positively affected by strong manufacturing growth. New Brunswick was the strongest of the Atlantic Provinces as manufacturing bounced back. Manufacturing and construction activity in Quebec and Ontario have been aided by exports to a strong U.S. economy, despite the strong dollar, and by consumer spending and business investment. Manitoba had good performance in all sectors other than agriculture in 2004, and its relatively large manufacturing sector is benefitting from export growth. High commodity prices have meant strong growth in Saskatchewan and Alberta, with oil important in both provinces and potash important in Saskatchewan. Agriculture was affected by poor weather and by the continued closure of the U.S. border to live cattle. British Columbia had strong exports to both the United States and Asia; wood production and residential building contributed most to growth.

Table 2-2 shows provincial economic performance in 2004/03.

TABLE 2-2: PROVINCIAL ECONOMIC GROWTH, 2004/03

(GDP at basic prices in constant 1997 dollars)

	Percentage Change 2004/03	*Percentage Change 1998/03*
Newfoundland and Labrador	(0.9)	7.5
Prince Edward Island	1.6	2.7
Nova Scotia	1.3	3.5
New Brunswick	2.5	3.3
Quebec	2.2	3.7
Ontario	2.8	4.1
Manitoba	2.3	2.2
Saskatchewan	3.3	0.9
Alberta	4.0	3.1
British Columbia	4.0	3.0
Territories	4.1	8.6

Source: Statistics Canada, Conference Board of Canada

INTERNATIONAL TRADE[1] AND TRADE FLOWS

By the end of 2004, Canada's trade surplus with the rest of the world had increased by over 25 per cent returning to its high 2000 level of $57 billion, as both exports and imports increased.

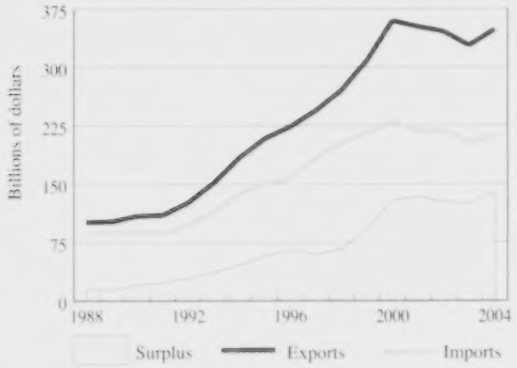
Trade with the U.S.

The United States was by far Canada's most important trading partner in 2004, accounting for 73 per cent (in value) of Canada's total trade with the world (69 per cent in 1988). Canada's exports to the United States represented 85 per cent of Canada's total exports to the world. This share has been stable at 85-86 per cent since 1998. In contrast, Canada's imports from the United States fluctuated between 64 and 68 per cent of total imports from the world during the period 1988 – 1998 before reaching a low of 59 per cent in 2004. As a result, Canada's annual surplus with the United States has enjoyed an annual average growth of 12 per cent over the last 10 years.

1 Customs-based trade statistics are being used in this report as detailed information on commodity, modes of transport and geographic region is presented on a Customs basis only.

Figure 2-3 tracks the value of trade with the United States from 1988 to 2004.

FIGURE 2-3: VALUE OF GOODS TRADED BETWEEN CANADA AND THE UNITED STATES, 1988 – 2004



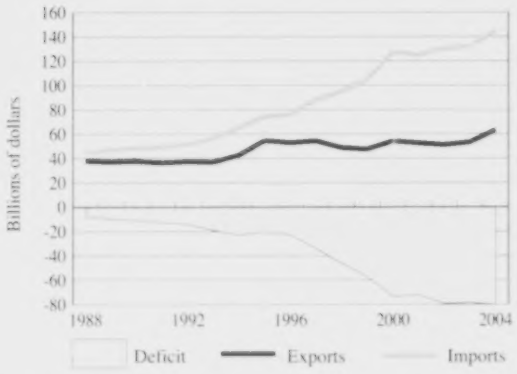
Note: Customs-based trade data; preliminary data for 2004.

Source: Transport Canada, adapted from Statistics Canada, International Trade Database.

After peaking at $589 billion in 2000, Canada's trade with the United States totalled $556 billion in 2004, an increase of five per cent over 2003. In terms of value, trucks carried 62 percent of this trade, followed by rail (18 per cent), pipeline (11 per cent), air (six per cent) and marine (three per cent). Trucking was the dominant mode for both exports (53 per cent) and imports (78 per cent). By volume, pipelines ranked first, at 33 per cent (mainly in exports), followed by trucks (31 per cent), rail (18 per cent) and marine (17 per cent).

Between Canada and the United States, the most important trade flows involved Ontario and the U.S. Central Region,[2] totalling $171 billion. This included $86 billion from and to Michigan alone. Four of the top six Canada-U.S. trade flows involved Ontario. Almost 76 per cent (in value) of the Canada-U.S. trade carried by trucks was concentrated at six border crossing points: Windsor/Ambassador Bridge, Fort Erie, Sarnia and Lansdowne in Ontario, Lacolle in Quebec and Pacific Highway in British Columbia.

FIGURE 2-4: VALUE OF GOODS TRADED BETWEEN CANADA AND OTHER COUNTRIES, 1988 – 2004



Note: Customs-based trade data; preliminary data for 2004.

Source: Transport Canada, adapted from Statistics Canada, International Trade Database.

TRADE WITH OTHER COUNTRIES

Canada's trade with other countries totalled $209 billion in 2004, driven by imports valued at $145 billion. This trade has registered deficits since 1988, as imports from other countries generally exceeded Canada's exports to these countries. As Figure 2-4 shows, trade deficits have grown at an annual average rate of 14 per cent in the last 10 years.

In terms of value and volume, marine and air were the dominant modes, capturing more than 90 per cent of the trade with overseas countries. In 2004, six trade flows accounted for almost 75 per cent of Canada's total trade with countries other than the United States. Four of these were two-way flows between eastern provinces and west Europe ($18 billion in exports, $43 billion in imports) and between western provinces and Asian countries ($16 billion in exports, $18 billion in imports). The other two-way flows were import-oriented, moving to eastern provinces from Asian countries ($40 billion) and Latin American countries ($20 billion), mainly Mexico.

For more detailed information on Canada's trade with the United States and other countries, see tables A2-1 to A2-9 in the Addendum.

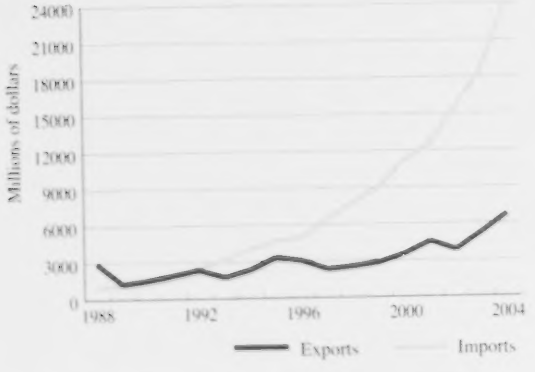
2 The US Central Region includes states bordering the Great Lakes area (i.e., Michigan, Ohio, Indiana, Illinois, Wisconsin) and the states of Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska and Kansas.

NEW TRENDS AND PORT CONGESTION

From 1994 to 2004, the average growth rate for imports from non-U.S. countries reached 8.3 per cent — twice the rate of exports from Canada to these countries at 4.1 per cent. Out of Canada's top 20 trade partners in 2004, five countries had a two-digit average annual growth rate over the 1994 – 2004 period: People's Republic of China (20 per cent for imports, 11 per cent for exports); Mexico (12 per cent for imports, 11 per cent for exports); India (13 per cent for imports, 12 per cent for exports); Algeria (28 per cent for imports); and Norway (11 per cent for imports). Addendum Table A2-10 shows a list of Canada's top 25 trade partners in 2004 with appropriate ranking and growth rate.

China's (People's Republic) increased trade with Canada and the U.S. has been a new driving force in North American business, putting more strain on transportation infrastructure and modal logistics. In the last five years (1999 – 2004), China's exports and imports to and from Canada recorded an average annual growth of 22 per cent and 20 per cent, respectively. In 2004, China ranked 2nd ($24.1 billion) and 4th ($6.6 billion), respectively, in Canada's total imports and exports from and to the world. As a result, China has surpassed Japan and Mexico as a source of imports for both Canada and the U.S. Figure 2-5 illustrates the evolution of Canada's trade with China since 1988.

FIGURE 2-5: VALUE OF GOODS TRADED BETWEEN CANADA AND CHINA (PEOPLE'S REPUBLIC), 1988 – 2004



Note: Customs-based trade data, preliminary data for 2004.

Source: Transport Canada, adapted from Statistics Canada, International Trade Database.

Between 1994 and 2004, marine exports to China almost quadrupled to reach $5.8 billion, while air exports were eight times their 1994 level totalling $687 million. On the import side, the pattern is similar. Marine imports quadrupled and air imports are10 times their 1994 level. In addition to China, Mexico, India, Brazil and other Asian countries showed strong growth in a very short span of time.

In recent years, the impact of increased trade on transportation infrastructure and the modes has been tremendous. It has translated into more containerization, which has resulted in container congestion at major west coast ports, such as Vancouver, Los Angeles, Long Beach. Already, after only two months (January and February) of activity in 2005, the Port of Vancouver reported an 11 per cent increase in containers handled (imports in TEU) when compared to the 2004 record period. The pressure on transportation infrastructure and modes may also be measured in terms of heavier loads, shortage of intermodal railroad cars, road and border congestion, environment (pollution) and security. Longer waiting periods put a strain on the 'just-in-time' concept as post-September, 2001 security measures and increased trade logistics must interrelate more closely.

Measures to support the transport infrastructure are already in place. These measures include, expansion plans by major ports and carriers to keep up with the growth of container traffic, and customs measures to facilitate cargo movements (FAST system). The efficient flow of traffic across the border with the U.S. is essential to maintain the Canadian route as a key corridor for container traffic between Asia and U.S. markets. The Port of Vancouver, in some ways, is the leader in North America's gateways for Asia-Pacific trade.

AREAS OF IMPORTANCE TO TRANSPORTATION

TRAVEL AND TOURISM

International travel to and from Canada rose 3.2 per cent in 2004, reversing the 7.1 per cent drop of 2003. The increase was larger in travel with countries other than the United States. Reflecting the stronger Canadian dollar, trips by Canadians rose 6.5 per cent overall; trips to the United States rose 5.6 per cent while trips to other countries rose 13.1 per cent. Travel by residents of other countries to Canada saw an overall increase of 24.3 per cent, while trips by Americans to Canada fell

2.5 per cent. Transborder air travel growth was strong. Trips by Americans by plane to Canada rose 10.6 per cent and trips by Canadians to the United States by plane increased 9.8 per cent.

Table 2-3 shows international travel in 2004.

TABLE 2-3: INTERNATIONAL TRAVEL, 2004

	2004	*Percentage change from 2003*
Trips by Canadians	41,786,293	6.5
To United States	36,047,297	5.6
Automobile	29,649,404	4.6
Same-day	21,520,394	3.1
Overnight	8,129,010	8.5
Airplane	4,640,006	9.8
To all other countries	5,738,996	13.1
Trips by non-residents	38,844,666	(0.1)
by U.S. residents	34,626,114	(2.5)
Automobile	27,254,823	(5.2)
Same-day	17,845,999	(9.1)
Overnight	9,408,824	3.2
Airplane	4,328,939	10.6
Trips by all other non-residents	4,218,552	24.3
Total international trips	80,630,959	3.2

Source: Statistics Canada cat. No. 66-001

Domestic travel[3] fell 8.3 per cent in 2003 to 172.2 million trips, down from a six-year high of 187.9 million in 2002. Both same-day and overnight travel fell by 7.3 per cent and 9.4 per cent, respectively. Same-day travel by air rose 24.1 per cent after falling 35.5 per cent in 2002. By contrast, same-day travel by rail fell 27.9 per cent after increasing 10.6 per cent the previous year. Both interprovincial and intraprovincial travel declined.

In 2004, tourism expenditures in Canada were $55.5 billion, up 6.5 per cent from 2003, a reversal of the 2.0 per cent decline in 2003. Tourism spending by Canadians rose 4.5 per cent, while spending by foreigners rose 4.2 per cent. Tourism recovered after being adversely affected by the SARS outbreak, the war in Iraq, the forest fires in British Columbia, and the August power outage in Ontario in 2003. Tourism expenditures on transportation were $20.3 billion, up 9.3 per cent. Expenditures on air travel rose 9.4 per cent, while motor vehicle-related expenditures rose 9.7 per cent. See tables A2-11 to A2-21 in the Addendum for more on tourism.

Employment

While recent figures are not available for all modes, the number of people employed in the transportation sector is estimated to be around 834.8 thousand.[4] The trucking industry had the greatest number of employees in the transportation sector with 329 thousand, or 39.4 per cent. In 2004, employment in the air transport services increased for the second year in a row, to 79.7 thousand. Estimates for rail services employment are unchanged at 36.4 thousand. Employment in highway construction and maintenance is estimated to be 65 thousand in 2004.

For detailed information on employment and salaries in the transportation sector see tables A2-22 to A2-47 in the Addendum.

Energy Consumption

Total domestic energy consumption increased by 2.7 per cent in 2003. The strongest sectors were mining (+22 per cent) and forestry, which after a 6.2 per cent decline in 2002 rebounded with a 9.3 per cent increase. This surpassed all levels of consumption registered since 1990. The only sectors to see declines in energy use were public administration (-1.6 per cent) and manufacturing, not including its transportation component (-1.1 per cent). Energy consumption by the transportation sector increased by only 0.7 per cent, reducing its share of the total from 33.8 per cent in 2002 to a still significant 33.2 per cent in 2003.

Road energy use increased by 3.2 per cent in 2003, making it the only mode to use more energy. This boosted its share of total transportation energy consumption to 77 per cent, compared with 75 per cent the two previous years. The aviation sector used the same amount of energy in 2003 as in 2002. All other modes used less energy, pipelines by 15.2 per cent, marine by 6.9 per cent and rail by 0.3 per cent. See Addendum tables A2-48 to A2-55 for more on transportation energy consumption.

3 Domestic travel refers to trips at least 80 kilometres from a traveller's usual place of residence, excluding trips to or from work or school.

4 This estimate excludes private trucking employment.

PRODUCTIVITY AND PRICE PERFORMANCE OF TRANSPORT

In 2003, productivity in selected transport industries (rail, air and trucking) increased marginally by 0.3 per cent, in large part due to a gain of nearly one per cent in labour productivity. These modest increases are well below the average yearly increases experienced in labour (2.9 per cent) and multi-factor (2.9 per cent) productivity throughout the 1998-2003 period.

Fuel unit costs increased by 7.9 per cent on average in 2003 for the rail, air and trucking industries with the air industry experiencing the largest increase (15.5 per cent). Public carriers' total unit costs increased by 6.0 per cent as opposed to 1.9 per cent for private business carriers.

Transport prices and demand fluctuated in the rail, air and trucking industries in 2003. Freight prices increased by 1.8 per cent on average while demand rose by 2.3 per cent. In the passenger transportation, prices and demand dropped by an estimated 5.8 and 6.6 per cent, respectively, possibly reflecting the impact of the SARS outbreak and the war in Iraq. However, in contrast to air passenger transportation, demand and prices for public passenger carriers rose 0.7 and 2.5 per cent, respectively. (See tables A2-56 to A2-64 in the Addendum.)

IMPORTANCE OF TRANSPORTATION TO THE CANADIAN ECONOMY

Value-added Output of Commercial Transportation

Value-added estimates[5] of output are available for transportation services that are offered on a commercial or for-hire basis. Such estimates do not include transportation services that are operated by a company for its own use, such as private trucking.

In 2004, commercial transportation industries accounted for $43.3 billion (1997 dollars), or 4.1 per cent of the GDP in Canada, a marginal increase over 2003. Trucking was the most important industry, making up $14.4 billion or 1.4 per cent of the total output. The air and rail transportation industries accounted for $3.8 billion (0.4 per cent) and $5.5 billion (0.5 per cent), respectively, while urban transit accounted for $3.3 billion (0.3 per cent) of GDP.

Table 2-4 shows the contributions of the different modes to Canada's GDP in 2004.

TABLE 2-4: COMMERCIAL TRANSPORTATION AS A PROPORTION OF GDP,[1] 2004

	Millions of constant 1997 dollars	*Per cent of GDP*
Industries		
Air	3,780	0.4
Rail	5,452	0.5
Water	1,396	0.1
Truck	14,412	1.4
Urban transit systems	3,265	0.3
Interurban and rural bus	204	0.0
Miscellaneous ground passenger transportation	1,763	0.2
Other transportation[2]	13,007	1.2
Transportation industries	43,279	4.1

1 Gross Domestic Product at Basic Prices.
2 Includes scenic and sightseeing, postal and courier services as well as support activities for other modes of transportation such as baggage handling, pilotage, harbour operation and rail car loading and unloading.

Source: Statistics Canada Cansim Table 379-0019.

Transportation-Related Demand

The total of all transportation expenditures for the final demand of goods accounted for 12.5 per cent of expenditures in Canada's economy in 2004. Personal expenditures on transportation were the largest portion of the demand and accounted for 8.2 per cent of GDP, an increase of two per cent over 2003. However, this was lower than the five per cent per year average growth rate of the previous five years and reflects a one per cent decrease in motor vehicle purchases. Transportation equipment purchases, mostly motor vehicles, made up 3.6 per cent of the GDP, while other motor vehicle expenses, including maintenance and repair, fuel and licences, accounted for another six per cent. Personal expenditures on commercial transportation were one per cent of total GDP. For a more detailed breakdown of personal expenditures for transportation, see Table A2-65 in the Addendum.

Investment in transportation made up 2.6 per cent of the GDP in 2004. Investment by business accounted for the largest portion of this, 2.0 per cent of GDP. Even though investment in transportation equipment rose 5.1 per cent, overall, business transportation investment fell by 1.3 per cent, as investment in inventories, primarily in motor vehicles, fell sharply. Government investment in transportation was heavily dominated by expenditures on roads, which made up 89 per cent of spending and accounted for 0.6 per cent of the GDP. For more detailed information on government transportation spending, see Chapter 3 of this report.

5 A value-added measure of output is referred to as net output and is equivalent to gross output or total sales net of goods and services purchased by a firm as intermediate inputs and includes only primary inputs such as labour.

TABLE 2-5: TRANSPORTATION DEMAND AS A PROPORTION OF GDP, 2004

	Millions of dollars 2004	*Per cent of GDP 2004*	*Per cent annual growth rate 2003 – 2004*	*Per cent annual growth rate 1998 – 2003*
Personal Expenditures on Transportation	**106,453**	**8.2**	**3.2**	**5.0**
New and used transportation equipment	46,695	3.6	(3.1)	4.8
Repair and maintenance expenditures	14,858	1.1	6.0	6.2
Transportation fuels and lubricants	24,137	1.9	11.6	7.7
Other motor vehicle related services	7,973	0.6	7.5	4.4
Purchased commercial transportation	12,790	1.0	7.8	0.8
Investment in Transportation	**33,936**	**2.6**	**0.4**	**N/A**
Business investment in transportation	25,849	2.0	(1.3)	N/A
Transportation infrastructure (roads and railways)	2,270	0.2	5.2	6.8
Transportation equipment	21,823	1.7	5.1	2.1
Inventories	1,756	0.1	(46.3)	N/A
Government investment in transportation	8,087	0.6	6.2	3.9
Transportation infrastructure (roads)	7,168	0.6	10.1	4.4
Transportation equipment	919	0.1	(16.8)	1.2
Government Spending on Transportation[1]	**12,043**	**0.9**	**(0.2)**	**1.8**
Road maintenance	7,133	0.6	(7.7)	1.3
Urban transit subsidies	2,910	0.2	10.3	(1.2)
Other spending	2,001	0.2	17.0	9.8
Exports	**102,180**	**7.9**	**4.6**	**2.2**
Automotive products	90,323	7.0	3.4	2.2
Commercial transportation	11,857	0.9	15.3	2.4
Imports	**93,077**	**7.2**	**2.8**	**2.9**
Automotive products	77,303	6.0	1.2	2.7
Commercial transportation	15,774	1.2	10.9	3.9
Total Transport-Related Final Demand	**161,535**	**12.5**	**3.6**	**N/A**
Gross Domestic Product at Market Prices	**1,293,289**	**100.0**	**6.1**	**5.9**
Transportation-related domestic demand	150,742	11.7	3.5	N/A
Final Domestic Demand	**1,229,458**	**95.1**	**5.6**	**5.5**

Note: N/A = Not available.

1 2004 figures: growth rates over previous year are growth rates over 2002.

Source: Statistics Canada National Income and Expenditure Accounts, Transport Canada

Automotive trade dominates transportation exports and imports. In 2004, exports of automotive equipment, including parts, were equivalent to 7.0 per cent of the GDP, while imports were equivalent to 6.0 per cent. Automotive exports rose 3.4 per cent in 2004, while automotive imports rose 1.2 per cent.

Transportation-related domestic demand made up 11.7 per cent of final domestic demand in 2004. This is lower than the percentage for transportation-related final demand, reflecting the importance of automotive products to Canada's external trade.

PROVINCIAL AND TERRITORIAL TRANSPORTATION SPENDING

COMMERCIAL TRANSPORTATION

Table 2-6 shows the importance of provincial and territorial commercial transportation[6] to the Canadian total transportation GDP and to total provincial/territorial GDP. Most of the commercial transportation activity took place in Ontario and Quebec, which together account for 58 per cent of the total commercial transportation measured in GDP. Alberta and British Columbia accounted for 28 per cent. Transportation was most important to the Manitoba economy where it accounted for 6.1 per cent of GDP.

TABLE 2-6: COMMERCIAL TRANSPORTATION AS A PER CENT OF GDP BY PROVINCE AND TERRITORIES, 2001

	Millions of dollars	*Per cent of total Canadian*	*Per cent of total provincial/ territorial*
Newfoundland and Labrador[1]	448.7	1.1	3.5
Prince Edward Island[1]	74.4	0.2	2.4
Nova Scotia[1,2]	1,015.0	2.4	4.3
New Brunswick[1,2]	1,011.6	2.4	5.4
Quebec	9,053.4	21.3	4.2
Ontario	15,405.9	36.3	3.7
Manitoba[1]	1,975.1	4.7	6.1
Saskatchewan	1,193.0	2.8	3.8
Alberta	5,175.5	12.2	3.5
British Columbia	6,875.7	16.2	5.6
Territories[1,2]	182.4	0.4	3.7

Note: GDP at basic prices.

1 Includes warehousing.

2 Includes pipeline.

Source: Statistics Canada Cansim Table 379-0025

6 Due to unavailability of constant dollar estimates of provincial GDP by industry only current dollar estimates of transportation are available. The latest year for which they are available is 2001. For some provinces and territories it is not possible to obtain estimates that do not include warehousing and/or pipelines due to confidentiality reasons.

PERSONAL TRANSPORTATION

In 2003, Canadians spent $103.1 billion on personal transportation. Of this total, Ontario residents accounted for 40 per cent, Quebec residents 23 per cent, British Columbia residents 13 per cent, and Alberta residents 11 per cent.

On a per capita basis, Alberta residents spent an average of $3,684 on transportation in 2003, the most of any province or territory. Nunavut residents spent the least, only $1,026. Other than Alberta, only Ontario, Yukon and Northwest Territories residents spent more than the national average of $3,257.

On average, Canadians spent 15.0 per cent of total personal expenditures on transportation in 2003. Quebec residents spent 16.0 per cent of their total personal spending on transportation, the highest proportion of any province or territory.

Personal expenditures on transportation represented 8.9 per cent of final domestic demand in Canada in 2003. It made up at least 9.0 per cent in New Brunswick, Quebec and Ontario, but only 6.2 per cent in the Yukon, 4.5 per cent in the Northwest Territories and 1.7 per cent in Nunavut.

Table 2-7 shows personal expenditures on transportation by province and territory in 2003.

TABLE 2-7: PERSONAL EXPENDITURES ON TRANSPORTATION BY PROVINCE AND TERRITORY, 2003

	Millions of dollars	*Per capita dollars*	*Per cent of total Provincial/ Territorial personal expenditures*	*Per cent of total Canadian personal transportation expenditures*	*Per cent of Provincial/ Territorial final domestic demand*
Newfoundland and Labrador	1,452	2,801	15.2	1.4	7.9
Prince Edward Island	372	2,711	14.2	0.4	8.1
Nova Scotia	2,720	2,905	14.3	2.6	8.2
New Brunswick	2,240	2,982	15.8	2.2	9.1
Quebec	24,027	3,207	16.0	22.8	9.5
Ontario	40,716	3,322	14.7	40.0	9.0
Manitoba	3,229	2,780	13.7	3.1	8.3
Saskatchewan	2,866	2,882	14.1	2.7	8.1
Alberta	11,637	3,684	15.3	11.2	8.0
British Columbia	12,919	3,111	13.8	12.6	8.5
Yukon	112	3,659	14.3	0.11	6.2
Northwest Territories	142	3,353	12.7	0.14	4.5
Nunavut	30	1,026	6.9	0.03	1.7
Canada	**103,131**	**3,257**	**15.0**	**100.0**	**8.9**

Source: Statistics Canada

GOVERNMENT SPENDING ON TRANSPORTATION

3

In fiscal year 2003/04, transportation expenditures by all levels of government were nearly $20 billion.

This chapter gives an overview of the financial implications of public-sector involvement in transportation. It first summarizes all transportation expenditures and revenues by level of government. It then gives a synopsis of federal and provincial revenues from transportation users, followed by a detailed breakdown of expenditures by level of government. Finally, it presents consolidated expenditures by mode.

GOVERNMENT TRANSPORTATION EXPENDITURES

As shown in Table 3-1, transportation expenditures by all levels of government reached about $19.7 billion in 2003/04, an increase of $231 million, or 1.2 per cent from the previous year. Transportation spending by governments on a per capita basis was $620, up 0.3 per cent. Although all levels of government contributed to this growth, the largest increase was by provincial/territorial governments, which increased their net spending by $139 million, or 1.7 per cent. Local governments decreased their net spending marginally by $35 million, or 0.4 per cent. Federal transport expenditures increased by $127 million, or 5.0 per cent, and are expected to increase by $199 million, or 7.5 per cent in 2004/05. All government fees and tax revenues from transport users totalled $15.3 billion, in 2003/04, up 3.0 per cent. Federal non-tax revenues from transport users are expected to decline 3.9 per cent in 2004/05, following a decline of 12.3 per cent in 2003/04. Table A3-1 in the Addendum shows gross and net expenditures on transportation by governments from 1995/96 to 2004/05.

TABLE 3-1: GOVERNMENTS' GROSS AND NET EXPENDITURES ON TRANSPORTATION, 2000/01 – 2004/05

(Millions of dollars)

	2000/01	*2001/02*	*2002/03*	*2003/04*	*2004/05*[E]
Transport Canada expenses (Gross)[1]	1,233	1,529	1,352	1,382	1,465
Other federal expenses (Gross)	786	783	1,163	1,261	1,376
Provincial/Territorial[2]	7,599	7,727	8,152	8,291	N/A
Local[3]	8,189	8,538	8,764	8,729	N/A
Total gross transport expenditures	17,808	18,577	19,431	19,663	N/A
Gross expenditures per capita	579	597	618	620	N/A
Transport Canada revenues	352	371	423	334	347
Other federal revenues[4]	45	37	482	459	416
Specific tax revenues from transport users[5]	13,379	13,365	13,955	14,509	N/A

Note: N/A = Not available. More yearly data are available on Transport Canada's Web site (www.tc.gc.ca). Some figures from previous years have been modified and therefore do not match last year's report. Totals may not add up due to rounding.

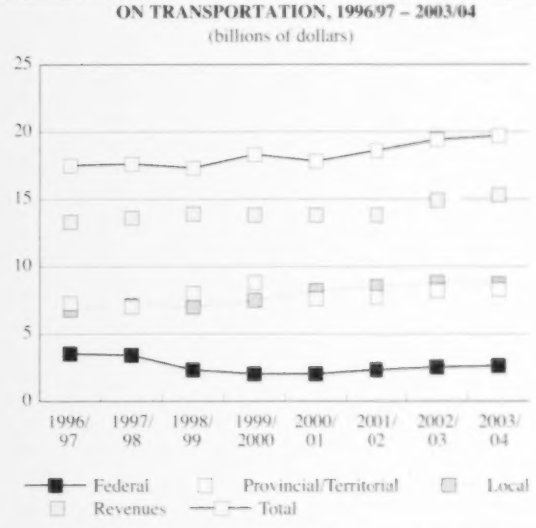
1. Excludes transfers of $22 million to Crown Corporations not involved in transport in 2002/03 and 2003/04, payments to CATSA and an estimated portion of transfers for Toronto Waterfront Revitalization Project not transport-related.
2. Net of federal transfers as reported by the provinces.
3. Calendar year basis; net of federal and provincial transfers. Revisions of more than $1 billion in 2001/02.
4. Revenues from Coast Guard services and small port users.
5. Federal excise fuel taxes, and provincial motive fuel taxes and licence fees.

E Forecast at January 31, 2005, of full year.

Source: Main Estimates of the Government of Canada; Transport Canada, Finance Directorate; The Canadian Transportation Agency; internal reports from several agencies and federal departments; provincial/territorial departments of transportation; Statistics Canada, Public Institutions Division, unpublished data.

Figure 3-1 shows the trend in spending by level of government from 1996/97 to 2003/04. Net local expenditures have generally risen over this period, while both net provincial/territorial and federal expenditures have had periods of decline. Total government expenditures fluctuated around $17.5 billion until 1998/99 but have trended up in the past five years. Total revenues stayed below $14 billion until 2001/02, after which they have risen.

FIGURE 3-1: GOVERNMENT EXPENDITURES AND REVENUES ON TRANSPORTATION, 1996/97 – 2003/04



Source: Main Estimates of the Government of Canada; Transport Canada, Finance Directorate; The Canadian Transportation Agency; internal reports from several agencies and federal departments; provincial/territorial departments of transportation; Statistics Canada, Public Institutions Division, unpublished data

Federal Expenses Related to Transport Facilities and Services

The Government of Canada operates roads and bridges, airports, harbour/ports and marine navigational and rescue services (Coast Guard). It also provides modal safety, security and policy services. Transport Canada performs several multimodal activities, ranging from security and emergency preparedness to regulating and monitoring the transportation of dangerous goods. As Table 3-2 shows, total direct federal transport expenses in 2004/05 are forecast to increase by 8.5 per cent to reach close to $2.0 billion. These expenses have increased 42 per cent since 2000/01, reflecting the increased spending on safety and security.

Canadian government activities in transportation fall under two broad categories: operations; and safety, security and policy. Expenses related to operations have been fairly constant over the past five years but are expected to increase by $13.4 million (1.5 per cent) in 2004/05 to reach $938 million. Expenditures on safety, security and policy are expected to increase by $130 million (16.4 per cent) to reach $921 million. This is a comparable increase to the previous year. Major increases in recent years are related to commitments to security in the air sector, particularly spending by the Canadian Air Transport Security Authority. Table A3-2 in the Addendum shows expenditures by the federal government from 1996/97 to 2004/05.

TABLE 3-2: FEDERAL OPERATING, MAINTENANCE AND CAPITAL EXPENDITURES, 2000/01 – 2004/05

(Millions of dollars)

	2000/01	*2001/02*	*2002/03*	*2003/04*	*2004/05[p]*
Operations	**945**	**945**	**934**	**924**	**938**
Airports	92	75	56	75	60
Aircraft services	70	59	57	62	63
Coast Guard	496	475	498	505	510
Ports and harbours[1]	116	117	118	126	154
Roads and bridges[2]	159	208	193	147	151
Research and development	11	10	13	10	-
Safety, Security and Policy	**353**	**446**	**686**	**791**	**921**
Canadian Air Transport Security Authority	-	-	259	351	449
Air Safety and Policy[3]	154	162	169	190	175
Marine Safety and Policy	49	56	59	58	90
Road and Rail Safety and Policy	40	46	53	48	49
Multimodal Policy and Safety[4]	111	181	146	144	157
Corporate Services of Transport Canada	**111**	**124**	**131**	**119**	**127**
Total	**1,409**	**1,515**	**1,750**	**1,834**	**1,985**

Note: More detailed data are available on Transport Canada's Web site (www.tc.gc.ca).
1. Includes expenses for small fishing ports by Fisheries and Oceans Canada.
2. Includes contributions by Transport Canada to the Champlain and Jacques Cartier Bridges, and expenses of the National Capital Commission, Public Works and Government Services Canada, Parks Canada, and Indian and Northern Affairs.
3. Includes expenses of the Civil Aviation Tribunal.
4. Includes expenses for the regulation and inspection of the transportation of dangerous goods, Security and Emergency Preparedness, the Canadian Transportation Agency, and other multimodal safety, policy and analysis. Large increases in 2001/02 related to the purchase of explosives detection equipment.
P Forecast at January 31, 2005, of full year.

Source: Transport Canada

Federal Subsidies to Transportation

In 2004/05, total federal direct subsidies, grants and contributions are projected to increase by $49 million (6.0 per cent) to reach $856 million. The major source of this increase is highway transfers, which are expected to increase by $96 million to $363 million. Subsidies to the rail mode decreased by $62 million, primarily due to a $73 million drop in payments to VIA Rail. Subsidies to the air mode also declined by $9 million to $37 million. Subsidy payments to the marine mode rose by $4 million to $149 million. Table 3-3 gives more details on these subsidies. Addendum Table A3-3 gives the same information over a greater time series.

TABLE 3-3: DIRECT FEDERAL SUBSIDIES, GRANTS AND CONTRIBUTIONS BY MODE, 2000/01 – 2004/05

(Millions of dollars)

	2000/01	2001/02	2002/03	2003/04	2004/05[F]
Air Mode					
Airport (Operation & Capital)	46.8	50.6	35.3	38.4	34.2
Airport/Airline Assistance[1]	-	123.9	25.4	4.5	-
Other	1.8	2.9	2.7	3.2	3.3
Total Air	48.5	177.4	63.4	46.0	37.5
Marine Mode					
Marine Atlantic	38.6	36.8	46.4	41.6	72.9
Transfers to ports[2]	45.4	21.6	22.1	65.7	27.1
Other ferry and coastal services	30.8	31.7	32.2	32.0	33.6
Other[3]	35.2	24.5	8.5	5.5	15.2
Total Marine	150.0	114.6	109.2	144.8	148.8
Rail Mode					
VIA Rail	231.6	310.2	255.7	264.2	191.3
Hopper cars	18.2	16.4	16.0	12.9	13.2
Grade crossings	7.5	7.5	7.5	7.5	7.5
Other[4]	8.4	8.3	8.6	8.9	20.2
Total Rail	265.7	342.5	287.8	293.6	231.3
Highway Modes					
Transition programs[5]	15.3	23.7	37.2	33.7	33.6
Highway agreements[6]	62.8	69.0	101.4	116.2	206.2
Infrastructure Canada program	-	7.4	33.8	39.7	50.2
Fixed link in Prince Edward Island	47.2	48.6	49.2	51.4	52.0
Other[7]	20.1	11.1	13.2	15.8	19.5
Total Highway Modes	145.4	157.9	234.8	256.8	267.3
Transit Systems[7,8]	**-**	**2.4**	**66.3**	**53.7**	**65.4**
Grand Total[9]	**610.1**	**797.4**	**763.0**	**797.2**	**807.7**

Notes: More detailed data are available on Transport Canada's Web site (www.tc.gc.ca). Transport-related expenditures by regional development agencies have been added, retroactively, to 1996/97. Totals may not add up due to rounding.

1 Includes air carrier assistance of $99 million in 2001/02 and a cabin security enhancement program of $25 million and $3.5 million in 2002/03 and 2003/04, respectively.

2 Includes contributions to the Port Divestiture Fund, a payment of $36 million to the Government of Quebec for the transfer of ferry wharves in 2000/01 and $64 million for the payment of a loan guarantee in 2003/04 and $9 million in support payments in 2004/05 to Ridley Terminals.

3 Includes a payment of $21.4 million to the Hamilton Harbour Commission for the settlement of a civil litigation in 2001/02.

4 Includes $14.2 million in 2004/05 for Regional and Remote Passenger Services.

5 Offset federal programs to the elimination of Western Grain Transportation Act Programs.

6 Includes $33 million in 2002/03, $65 million in 2003/04, and $202 million in 2004/05 under the Strategic Highways Infrastructure Program.

7 Includes in 2002/03 and 2003/04 the estimated road and transit portion of the Toronto Waterfront Revitalization Project.

8 Spending included previously under Highway Modes.

9 Includes small amounts not classified elsewhere.

F Forecast at January 31, 2005, of full year.

Source: Transport Canada, Fisheries and Oceans Canada, provincial/territorial departments of transportation.

Distribution of Provincial/Territorial and Local Expenditures by Province[1]

In 2003/04, provincial, territorial and local governments spent $17.0 billion on transportation net of transfers from the federal government. This was a $104 million (0.6 per cent) increase over 2002/03. In 2003/04 provincial/territorial governments spent about $438 million more than local governments. Net expenditures of provinces/territories increased by $139 million (1.7 per cent) to $8.3 billion. Local net expenditures, on the other hand, fell by $35 million (0.4 per cent) to $8.7 billion.

While for Canada as a whole, net provincial/territorial expenditures were approximately equal to local expenditures, this is not the case for all provinces. In the Yukon and Northwest Territories and Prince Edward Island, net local spending made up approximately 20 per cent of the combined spending with provincial governments, while in Ontario it made up only 64 per cent.

Net expenditures on transportation by the provincial and local governments in Ontario were the highest of any province or territory, at $5.6 billion, or 33 per cent of the national total. On a per capita basis, the Yukon and the Northwest Territories spent the most, more than $2,000 in 2003/04. Alberta and Prince Edward Island spent the most of the provinces, more than $700. Addendum Table A3-6 gives further details.

Since 1999/2000, provincial/territorial and local governments have spent an average of 2.5 per cent per year more on transportation. Quebec, Saskatchewan and Alberta had the largest average increases, approximately five per cent or more, while New Brunswick, Ontario and Manitoba had average growth rates below the national average.

Federal transfers in 2003/04 were equivalent to 1.9 per cent of transport spending by local and territorial governments. The Yukon and the Northwest Territories were the most reliant on federal transfers, with respectively 23 per cent and 12 percent of its transport spending dependent on federal transfers. New Brunswick followed at eight per cent.

Spending on highways and roads is the most important category of transport-related expenditures for all provinces. In 2003/04, it accounted for about 78 per cent of total net spending by provincial/territorial and local governments. In the Maritime provinces and Saskatchewan, it accounted for over 90 per cent. Nationally, provincial spending and local spending in this category accounted for about 37 per cent and 41 per cent respectively.

Other modes are also significant for some provinces/territories. Marine transportation is important for Newfoundland, where it made up 10 per cent of spending in 2003/04. Spending on air transportation is significant for the northern territories, accounting for 17 per cent of transport spending in the Northwest Territories. Expenditures on transit are important in the

1 Detailed data are available in the Addendum to this report on Transport Canada's Web site (www.tc.gc.ca).

most populous provinces, where they accounted for 19 per cent of total expenditures in 2003/04. British Columbia and Ontario reported the largest transit expenditure shares at 20 and 22 per cent, respectively.

TOTAL TRANSPORTATION REVENUES BY LEVEL OF GOVERNMENT

The federal government generates revenues from the use of transportation facilities and services. Revenues from cost-recovery initiatives are credited to the budgets of federal departments, while revenues from other sources are credited to the federal government's Consolidated Revenue Fund. Both are included in this analysis. Excise fuel taxes collected by the federal and provincial governments, as well as provincial licence and other fees, constitute revenues collected from transport users. Table 3-4 highlights government revenues from transport users from 2000/2001 to 2004/05.

In 2003/04, the most recent year for which budget information is available for all government levels, federal and provincial/territorial governments collected $15.3 billion from transport users through fuel taxes and permit and licence fees. This was a three p[illegible]cent increase from 2003/004. Road fuel taxes make up the largest component of government tax revenues from transportation; they averaged $10.4 billion, or 73 per cent of all government revenues from transport users, from 1999/2000 to 2003/04. In 2003/04, road fuel tax revenues increased by $478 million, or 4.5 per cent. Other fuel tax revenues decreased in 2003/04 by $12 million, or 2.0 per cent, due to a combination of reduced activity and increased fuel efficiency in other modes.

In 2004/05, federal government transportation revenues other than fuel taxes are expected to fall 3.9 per cent to $762 million. This is due primarily to lower air travellers security fees, which are expected to decrease from $420 million to $375 million. Marine fees are expected to total about $60 million, down from $72 million in 2003/04. Table 3-4 also shows other federal revenues not credited to transport, such as revenues from the leases of hopper cars or the sale of port assets.

TABLE 3-4: GOVERNMENT REVENUES FROM TRANSPORT USERS, 2000/01 – 2004/05

(Millions of dollars)

	2000/01	2001/02	2002/03	2003/04	2004/05[F]
Airport revenues	250	264	319	226	256
Aircraft services	28	34	26	23	30
Air travellers security charge	..	..	443	420	375
Marine revenues[1]	72	70	68	72	60
Leases of hopper cars[2]	14	14	15	19	15
Other fees and recoveries[3]	35	26	33	34	26
Total	397	408	905	793	762
Federal fuel taxes	4,807	4,758	4,873	5,119	N/A
Public and non-transport use[4,5]	405	396	384	402	N/A
Road[5]	4,168	4,136	4,252	4,458	N/A
Other modes[5]	234	227	237	258	N/A
Provincial/territorial fuel taxes	7,040	7,010	7,345	7,676	N/A
Sales tax equivalent[5,6]	799	777	793	860	N/A
Road[5]	5,952	5,965	6,280	6,551	N/A
Other modes[5]	289	268	273	264	N/A
Provincial/territorial licences/fees[7]	2,737	2,769	2,914	2,977	N/A
Total tax revenues from transport users	13,379	13,365	13,955	14,509	N/A
Total tax and fee revenues from transport users	13,776	13,772	14,860	15,302	N/A

Note: N/A = Not available. More yearly data are available on Transport Canada's Web site (www.tc.gc.ca).

1 Includes Coast Guard user fees and sales of marine assets credited to the Consolidated Revenue Fund.
2 Credited to the Consolidated Revenue Fund.
3 Includes air safety fees, other licensing and administrative fees, inter- and intra-departmental transfers for services and various regulatory fees credited to either Transport Canada or the Consolidated Revenue Fund.
4 Estimated fuel taxes from public administrations and mobile users of the public transport system.
5 Estimates by Transport Canada (revised).
6 Estimates based on the sales tax that would have applied to provincial fuel prices.
7 The amounts shown exclude licences and registration fees dedicated to the Société de l'Assurance Automobile du Québec.
F Forecast at January 31, 2005, of full year.

Source: Transport Canada; Fisheries and Oceans Canada; provincial/territorial departments of transportation.

OVERVIEW OF EXPENDITURES AND REVENUES BY MODE

Following is a summary of consolidated federal expenses, as well as expenditures by provincial/territorial and local governments, netted of transfers received from other levels of government from 2000/2001 to 2003/04. Table 3-5 shows transport expenditures and revenues by mode and level of government for this period.

In 2003/04, total government spending on roads fell 2.1 per cent to $13.6 billion, accounting for 69 per cent of overall spending on transportation. Road expenditures have risen at an average annual rate of 2.7 per cent for the past five years.

Public funding for transit systems rose $262 million (9.9 per cent) to $2.9 billion, accounting for 15 per cent of all government expenditures on transportation in 2003/04. This is the highest level since 1998/99.

In 2003/04, the air mode accounted for $805 million, or 4.1 per cent of gross government spending on transportation. Air-related public spending, which had been declining until 1999/2000, has since recovered by about 90 per cent. This increase in spending reflects the new initiatives related to safety and security.

Public spending related to the marine mode increased 10.8 per cent to just surpass $1 billion (excluding the transfer of the BC Ferry debt to the provincial government). The share of the marine mode in public spending on transportation has not changed significantly since the mid-1990s, remaining at about five per cent.

Public spending on rail accounted for 1.8 per cent of gross government spending on transportation in 2003/04. It has grown by 11 per cent per year since 1999/2000. Rail passenger subsidies make up about 80 per cent of total spending on rail.

The federal and provincial governments spent $2.2 billion on the air, marine and rail modes combined in 2003/04. They took in $1.3 billion in fees and tax revenues from transport users over the same period. Following the introduction of the Air Travellers Security Charge in 2002/03, revenues increased by $443 million.

The category "Other/Overhead" in Table 3-5 includes overhead expenses by all levels of government and expenditures related to multimodal activities. This category accounts for about four per cent of government transportation spending. Table A3-7 in the Addendum details government spending on transportation by mode from 1994/95 to 2003/04.

TABLE 3-5: TRANSPORT EXPENDITURES/REVENUES BY MODE AND LEVEL OF GOVERNMENT, 2000/01 – 2004/05

(Millions of dollars)

	2000/01	*2001/02*	*2002/03*	*2003/04*	*2004/05*[F]
Federal Operating and Maintenance, Capital and Subsidies[1]					
Air	364	474	605	724	785
Marine	811	763	784	833	903
Rail	283	363	313	315	255
Road	327	393	456	441	539
Transit	-	2	66	54	65
Other/Overhead	233	316	290	276	293
Subtotal	2,019	2,312	2,515	2,642	2,841
Provinces/Territorial/Local[2]					
Air	77	81	79	80	N/A
Marine	179	182	205	264	N/A
Rail	21	27	30	32	N/A
Road	12,847	13,147	13,489	13,207	N/A
Transit	2,341	2,424	2,568	2,842	N/A
Other/Overhead	324	405	546	596	N/A
Subtotal	15,789	16,265	16,916	17,020	N/A
Total Expenses: All Government Levels					
Air	442	555	683	805	N/A
Marine	989	945	989	1,096	N/A
Rail	304	390	343	347	N/A
Road	13,174	13,540	13,945	13,647	N/A
Transit	2,341	2,427	2,634	2,896	N/A
Other/Overhead	558	721	836	872	N/A
Subtotal	17,808	18,577	19,431	19,653	N/A
Government Revenues from Transport Users[3]					
Road users	12,857	12,870	13,446	13,989	N/A
Rail, Air and Marine	912	899	1,404	1,301	N/A
Multimodal	8	4	10	12	N/A
Total	13,776	13,772	14,860	15,302	N/A

Note: N/A = Not available. More details are available on Transport Canada's Web site (www.tc.gc.ca).

Totals may not add up due to rounding.

1. From tables 3-2 and 3-3.
2. Transport Canada; provincial/territorial departments of transportation. Many provinces have moved to unconditional grant to local governments; transportation transfers may therefore be underreported. Net expenses by local governments are netted against transfers reported by provincial governments. Statistics Canada, Public Institutions Division; data are on a calendar year basis.
3. From Table 3-4.
F. Forecast at January 31, 2005, of full year.

Source: Transport Canada; Fisheries and Oceans Canada; provincial/territorial departments of transportation

TRANSPORTATION SAFETY AND SECURITY 4

Canadians' confidence in transportation security in all modes continued to increase. There were fewer fatalities in both the air and road transportation modes, however, there was an increase in fatalities for marine and rail. The number of reported accidents decreased in aviation and marine, and increased for rail.

Transport Canada promotes the safety and security of Canada's transportation system consisting of the air, marine, rail and road modes of transportation, including the transportation of dangerous goods. A safe and secure transportation system aims to protect its citizens from those occurrences which result in the loss of or damage to life, health and property. It also enables the efficient flow of people and goods and protects the environment from pollution that can result from occurrences. It is an essential element for a healthy population, a high quality of life and a prosperous economy.

Policy development, rule-making, monitoring and enforcement, and outreach activities are carried out in support of the safety and security objective. Through its policy development and rule-making efforts for all the modes of transportation, Transport Canada establishes and implements legislation, regulations, standards and policies. Monitoring and enforcement activities include: issuing licences, certificates, registrations and permits, monitoring compliance through audits, inspections and surveillance, and taking appropriate enforcement action in instances of non-compliance. In particular, the department has inspectors who monitor the system to make sure the rules are being followed, and, if required, have the means to enforce the policies and rules. Outreach activities make the users and industry aware of the requirements and involve efforts to promote, educate and increase awareness of safety and security issues.

The safety and security of the transportation system is a shared responsibility among many stakeholders. Transport Canada collaborates with other federal departments and agencies whose programs and services may be affected by transportation activities. For example, with respect to promoting aviation security, this responsibility is shared with the Canadian Air Transport Security Authority (CATSA), which is responsible for delivering air transport security services in accordance with Transport Canada regulations and standards. Transport Canada works with provincial, territorial and municipal governments particularly concerning the maintenance of the highway system, enforcement of road safety and the co-delivery of the Transportation of Dangerous Goods (TDG) program. Transport Canada also works closely with transportation sector industries, agencies and associations, all of which have a vested interest in the transportation infrastructure, regulatory regime and transportation safety and security. In addition, Transport Canada collaborates with other countries such as the United States, Mexico and other international partners — such as the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO) — to harmonize safety and security standards and to share best practices in safety and security systems.

Canada already has one of the safest and most secure transportation systems in the world and continues to work diligently to further improve the system. One method of measuring the safety and security of the transportation system is through tracking the public's ratings of safety and security for each transportation mode. The data reveal that, in the case of all four transportation modes, more than 90 per cent of those Canadians who have an opinion give either a *moderately* or a *very* safe and secure rating. These most recent available ratings (January, 2005), are shown in Table 4-1.

TABLE 4-1: PUBLIC'S CONFIDENCE RATING OF THE SAFETY AND SECURITY OF AIR, RAIL, MARINE AND ROAD TRAVEL, JANUARY 2005

Per cent rating for:	*Moderately Safe and Secure (per cent)*	*Very Safe and Secure (per cent)*
Air Travel	36	61
Rail Travel	35	63
Marine Travel	46	51
Road Travel	65	29

Source: Rethinking Government 2004 – Wave 4 Report, EKOS Research Associates, February 2005

The level of transportation safety can also be measured by the number of occurrences that result in an accident. In 2004, a decrease in the number of accidents was noted in aviation and marine. There was an increase, however, in rail transportation accidents. The number of fatalities dropped in aviation transportation, but increased in marine and rail. The number of road fatalities decreased notably in 2003 (latest data). Moreover, the number of transportation-related fatalities has remained below the previous five-year averages in aviation, rail and road, and the transportation of dangerous goods. With the exception of a fluctuation in 2004 for rail, the safety performance record observed in the three other transportation modes has contributed towards the long-term downward trend in accidents reported over the past ten years. To further improve on the transportation safety performance on the long-term, implementation of the *Safety Management Systems (SMS)* is one of the key evolving strategic directions undertaken by Transport Canada. The *SMS* is a formal framework for integrating safety performance into day-to-day operations within the transportation industry. To date, the *SMS* regulations are being introduced for aviation, implementation of regulations has been well under way in rail, and the marine *SMS* is evolving towards increased adoption for operators of Canadian domestic vessels. In addition, the modal strategic plans — the Civil Aviation's *Flight 2005*, the *Direction 2006 in Rail Safety*, the Marine Safety's *Strategic Plan 2003-2010* and the *Road Safety Vision 2010* — all report progress in 2004 against the set performance targets for reducing, on the long-term, the number of accidents, fatalities and injuries.

Over the past year, Transport Canada continued to take action to further enhance transportation security in all modes. A key development last year was the announcement of the Government of Canada's National Security Policy. Transportation-related aspects include a six-point plan for marine security; enhancement of aviation security including air cargo; and improving and extending security background check requirements for transportation workers. A summary of other key initiatives is found in Table 4-2.

This chapter reviews developments and initiatives concerning the safety and security of Canada's transportation system during 2004. After a review by mode of the 2004 safety records, transportation security is discussed and the various enhancements undertaken in 2004 are reviewed.

TABLE 4-2: KEY TRANSPORT CANADA SECURITY INITIATIVES IN 2004

Legislative and Regulatory Enhancements
- *Public Safety Act*
- Regulatory framework for a new airport screening program for non-passengers
- Amendments to security regulations covering flight crew procedures and training
- Marine Transportation Security Regulations

Transportation Security Programs
- Cabin Security Enhancement Contribution Program
- Aviation Transportation Security Clearance Program
- Marine Security Contribution Program
- Chemical, Biological, Radiological, and Nuclear (CBRN) Response Project
- National Critical Infrastructure Assurance Program (NCIAP)

Awareness Campaigns and Industry Training Initiatives
- Air Cargo Security Awareness Campaign
- Development of air cargo security training program for air cargo handlers, air carrier representatives, and the travelling public

International Initiatives
- G8 Secure and Facilitate Travel Initiative
- International Civil Aviation Organization (ICAO)'s Universal Security Audit Programme
- International Maritime Organization (IMO) International Ship and Port Facility Security (ISPS) Code.

TRANSPORTATION SAFETY

The most recent safety-related statistics for all modes of transportation, as well as for the transportation of dangerous goods, are included in this section. One of the principal sources of safety-related occurrence statistics are the reports of accidents and incidents made to the Transportation Safety Board (TSB). Accidents are those occurrences that have resulted in the loss of or damage to life, health and property, while incidents are those that have the potential to result in an accident. The specific definitions of a reportable TSB accident and incident vary according to the transportation mode. (See the TSB Regulations at www.tsb.gc.ca/en/common/acts.asp for details on aviation, marine and rail.) Road collisions reported to the police are collected by the provinces and territories under the agreement of the Canadian Council of Road Transport Administrators and provided to Transport Canada to develop the national casualty collision statistics. The collection and processing of high volumes of data for more than 600,000 crash case occurrences annually can take over a year to compile before the statistics are released at the jurisdictional and national levels. Transport Canada is the primary source for the transportation of dangerous goods-related occurrence statistics (See the TDG regulations on reporting requirements at: www.tc.gc.ca/tdg/clear/part8.htm). As safety-related occurrence statistics, they provide indicators of the transportation system's safety performance and help focus efforts on those initiatives and activities that have high safety benefits. At the same time, efforts continue to better align and link safety-related data with

Transport Canada's key safety initiatives. In this year's report, these data alignment efforts are reflected for aviation where the TSB source data aligns with the Canadian Aviation Regulations for the *Flight 2005* strategic plan. (For more information, see Aviation Safety in this chapter.)

In 2004, the number of both aviation and marine accidents was down over 2003, by 16.5 and 12 per cent, respectively. The number of reported rail accidents increased, however, by nine per cent — seven per cent higher than the previous five-year average. The latest available statistics for road casualty collisions (2003) show a decrease of two per cent from 2002. Reportable accidents involving the transportation of dangerous goods increased slightly from 356 in 2003 to 379 in 2004.

The safety performance of the transportation system can also be measured by the number of fatalities. In 2004, there was just one fatality caused by dangerous goods in a transport accident. There were fewer fatalities in the air mode; however, there was an increase in fatalities for marine and rail, which also increased over the previous five-year averages for these two modes. From 2002 to 2003 (the most recent statistics), there was a notable decrease (5.6 per cent) in road-related fatalities. Table 4-3 and the more detailed Table A4-1 in the Addendum summarize the modal safety record, including the transportation of dangerous goods.

TABLE 4-3: SUMMARY OF TRANSPORTATION SAFETY STATISTICS BY MODE, 2004[P] (2003 FOR ROAD[4])

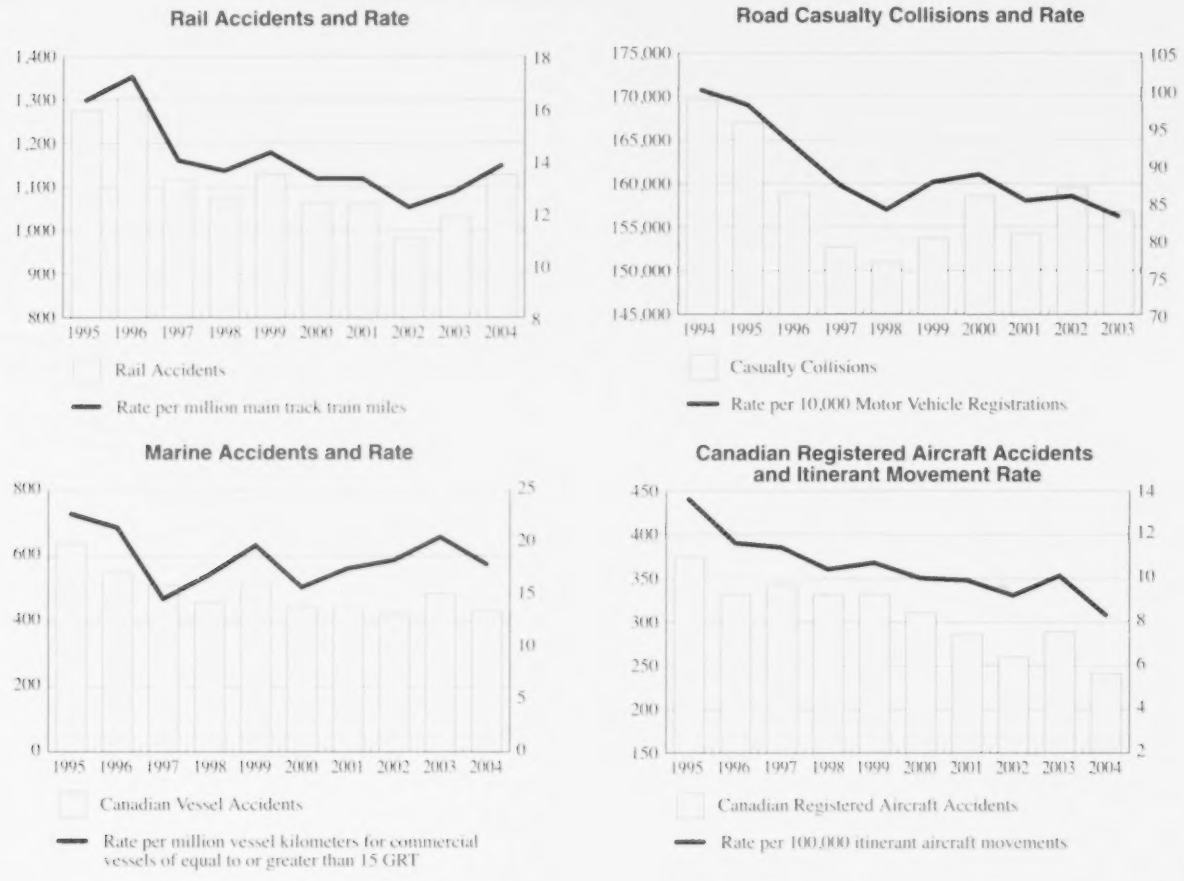
	Aviation[1]	*Marine*[2]	*Rail*[3]	*Road*[4]	*TDG*[5]
Accidents					
2004	241	431	1,128	156,764	379
2003	289	485	1,032	159,667	356
Five-year average (1999 – 2003)	295.6	462.8	1,053.6	155,455	436.8
Fatalities					
2004	34	27	99	2,766	1
2003	60	19	77	2,931	0
Five-year average (1999 – 2003)	55.6	23.4	93.2	2,915	1.2

Note: P = Preliminary data for 2004.
1. Canadian-registered aircraft, other than ultralights, based on the Canadian Aviation Regulations.
2. Accidents involving Canadian-registered vessels.
3. Railways under federal jurisdiction.
4. Road statistics relate to 2003 (most recent road safety statistics) and to the 1998-2002 five-year averages. Road accidents are casualty collisions, and exclude collisions in which only property is damaged.
5. TDG = Accidents where transportation of dangerous goods (TDG) were involved. Fatality data relate to only those deaths caused by the dangerous goods.

Source: Transportation Safety Board and Transport Canada

Both the long-term trends and specifics of each mode, including level of activity and the changes in exposure to risk, should be taken into account to ensure the year-over-year analysis and modal comparisons are complete. That said, accident rates in 2004 declined over the previous years for air. The accident rates for marine, available only for commercial vessels of over 15 gross registered tonnage, declined marginally over the past two years. The accident numbers for marine, however, are lower in 2004 than all other years, with the exception of 2002. The 2003 rates for road accidents decreased over previous years, once again becoming the lowest for the past ten years. The 2004 rates for rail accidents were up over recent years, but remained below the rates of the 1990s. These rates indicate that the changes in the levels of activity measures (representing to various degrees the increased exposure to risk) have contributed to the changes in the number of accidents. Figure 4-1 shows the ten-year trend for the four modes, a trend that, despite observed fluctuations from one year to another, is generally downward in terms of both number of accidents and accident rates per activity level. It is important to note that these rates are only a basis for interpreting the occurrence statistics in each mode and not for comparing across modes, given that the activity measure is particular to each mode. In addition, the available activity measure (denominator), representing to a certain extent all or key operations of modal activities, may have its own set of data limitations. For more details, including information on limitations of data, see Table A4-1 in the Addendum.

FIGURE 4-1: ACCIDENTS AND ACCIDENT RATES PER ACTIVITY MEASURE FOR RAIL, ROAD, MARINE AND AVIATION



Source: Transportation Safety Board, Transport Canada and Statistics Canada

Rail Safety

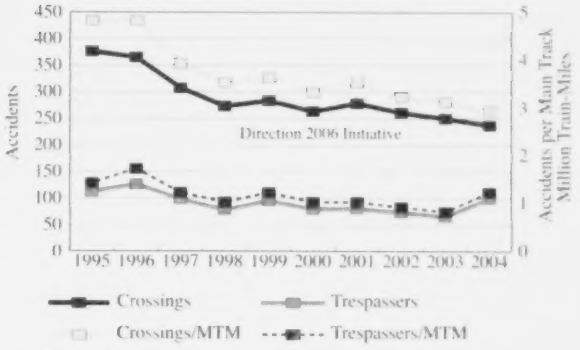
The number of rail accidents increased in 2004 by 9.3 per cent, from 1,032 in 2003 to 1,128 in 2004, and was seven per cent above the previous five-year average (1999-2003) of 1,053.6 accidents. An accident rate of 12.4 per million train-miles (includes main track train-miles and yard switching-miles) was observed in 2004, up from 11.5 in 2003 and the previous five-year average of 11.8. Of the reported accidents, the increase in 2004 over 2003 was attributed mainly to a greater number of non-main track derailments (from 389 in 2003 to 444 in 2004), and trespasser accidents (from 65 in 2003 to 99 in 2004). The non-main track accidents, involving either a derailment or collision (accounting for about half of the 2004 total) are generally minor, as they usually involve rolling stock travelling at slow speeds and generally pose less risk to the travelling public. The 52 per cent increase in the number of trespasser accidents, however, resulted in two thirds of all 2004 rail fatalities.

In 2004, there were 72 fatal accidents resulting in 99 fatalities, an increase from the 77 fatalities in 2003 and the 1999-2003 average of 93.2 fatalities. There were 92 serious injuries in 2004, an increase over the 77 serious injuries reported in 2003. For more details, including a provincial breakdown of accidents, fatalities and serious injuries, as reported to the Transportation Safety Board, and involving railways under federal jurisdiction, see tables A4-2 to A4-4 in the Addendum. In recent years, a federal/provincial data-sharing initiative was undertaken to capture occurrences under provincial jurisdiction. In 2004, the provincial railways continued to account for a small portion of the total national rail networks (12.5 per cent, with 41 companies under provincial jurisdiction), while federal railways accounted for most of the network (87.5 per cent, with 38 companies regulated federally).

Direction 2006 Initiative — In 1996, Transport Canada along with its partners, the Railway Association of Canada, provincial and municipal governments, railway companies and their unions, law enforcement agencies, and other safety organizations, joined to promote and implement initiatives to change human behaviour at grade crossings and with respect to trespassing on railway property through eight key result areas: education, communications, enforcement, research, resources, outreach, legislative and performance measurement. The objective is to reduce railway grade crossing collisions and trespassing incidents by 50 per cent by 2006. (For more information on Direction 2006, visit www.tc.gc.ca/Railway/Dir2006_e.htm.) A high proportion of crossing and trespasser accidents are fatal or result in serious injury and they continue to account for approximately 90 per cent of total rail fatal and serious injury accidents. Crossing accidents decreased five per cent, from 250 in 2003 to 237 in 2004, and remained below the five-year average. Fatalities related to crossing accidents also decreased slightly, from 28 in 2003 to 25 in 2004, as did serious injuries, from 52 to 50. There were 99 trespasser accidents in 2004, a 52 per cent increase over the 2003 total of 65, and a 26.3 per cent increase over the 1999-2003 five-year average of 78.4. Fatalities from trespasser accidents increased to 67 in 2004 from 45 in 2003, up from the 53.4 for the 1999-2003 five-year average. Serious injuries also increased from 19 in 2003 to 34 in 2004.

Figure 4-2 presents recent trends in crossing and trespasser accidents, indicating a declining trend despite increases in road use (approximately ten per cent increase in motor vehicle registrations since 1996 – see Addendum Table A4-4) and urban development around railway lines. The to date grade crossing collisions have been reduced by 70 per cent of the Direction 2006 target. Trespassing incidents, however, have fluctuated, and in 2004 this reduction was only 43 per cent of the Direction 2006 target.

FIGURE 4-2: CROSSING AND TRESPASSER ACCIDENTS, 1995 – 2004



Source: Transport Canada, based on Transportation Safety Board data

Grade Crossing improvement program — In 2004, crossing accidents at public automated crossings decreased from 136 in 2003 to 119 in 2004, and at public passive crossings from 72 in 2003 to 64 in 2004. However, accidents at private crossings increased from 36 in 2003 to 50 in 2004. See Addendum Table A4-4 for more details. Through the Grade Crossing Improvement Program, Transport Canada funds up to 80 per cent of safety enhancement costs at approximately 80 to 100 sites across the country, an annual investment of up to $7.5 million. Over $100 million has been invested in this program over the past 15 years.

Railway Safety Management Systems (RSMS) — The Railway Safety Management System is a formal framework for integrating safety into day-to-day railway operations. The RSMS Regulations, which came into effect on March 31, 2001, require all federally regulated railway companies to implement and maintain an RSMS. In 2003-04, Transport Canada continued to establish its RSMS audit program through ongoing industry education and awareness, assessing company safety management system documentation (pre-audit), and evaluating the implementation and effectiveness of documented processes and procedures (verification audit). To date, a total of 40 railways have been the subject of an RSMS pre-audit, 12 of which have also been through verification audits. As the initial audits and follow-ups are completed, future audits will move to a more focussed, integrated, issue-driven approach, based on results from the monitoring programs and previous RSMS audits. For more information on rail safety RSMS, visit www.tc.gc.ca/railway/SMS_Regulations.htm.

ROAD SAFETY

Canada's road safety record continues to improve decade after decade. In 2003, (most recent statistics) there was a two per cent decrease in casualty collisions from 2002. There was, however, a notable decrease (5.6 per cent) in road-related fatalities (from 2,931 in 2002 to 2,766 in 2003). The 2.5 per cent decrease in road-related injuries, translates into 5,723 fewer injuries in 2003. Addendum Table A4-5 illustrates annual and longer-term trends in road-related casualty collisions that have resulted in fatalities and injuries. The annual changes may be attributable in part to changes in vehicular traffic, such as the number of vehicle registrations (up 1.3 per cent in 2003 over 2002) and vehicle-kilometres travelled (down one per cent). The 2003 casualty collision rate (50.1) per 100 million vehicle-kilometres travelled decreased slightly over the 2002 rate (50.6). The longer-term downward trend in fatalities (497 fewer fatalities in 2003 than the 3,263 in 1994) and total injuries (22,850 fewer injuries in 2003 than in 1994) has helped reduce the estimated annual social cost to Canadians of up to $25 billion. These long-term trends are confirmed by a rate of 1.5 fatalities per 10,000 motor vehicle registrations in 2003 compared with 1.9 in 1994 (or to 2.5 for the 1984-1993 ten-year average). Continuing the trend of decreased rates, the 2003 rates became the lowest for the past ten years and since the 1950s. Data by provinces/territories are shown in Addendum Table A4-6.

Road Safety Vision 2010 (RSV 2010) — This initiative was introduced by the federal, provincial and territorial governments and the Canadian Council of Motor Transport Administrators. It aims to raise awareness of road safety issues, improve collaboration and cooperation among safety agencies, strengthen enforcement, and improve national road safety data collection and quality. Its national target is a 30 per cent decrease during the 2008 – 2010 period in the average number of road users killed or seriously injured over comparable 1996 – 2001 figures. In 2003, there were 6.7 per cent fewer fatalities and three per cent fewer serious injuries as compared to the 1996 – 2001 baseline of the RSV 2010. For more information on targets and sub-target areas, see *Road Safety Vision 2010-2002 Annual Report* at www.tc.gc.ca/roadsafety/vision/menu.htm.

Seat belts — A crucial RSV 2010 sub-target is to increase seat belt wearing rates among Canadians to 95 per cent or higher. Seat belts continue to save thousands of lives each year. In 2003, 36.8 per cent of driver and 37.4 per cent of passenger fatalities were victims who were not using seat belts. (See Addendum Table A4-7.) The percentages for serious injuries were much lower (14.6 and 19.8 per cent, respectively), pointing to a relatively higher risk of fatalities for those not wearing seat belts in serious road crashes. For more details, see www.tc.gc.ca/roadsafety/tp/tp3322/2003/menu.htm. In September 2002, Transport Canada conducted an observational survey of seat belt use in rural communities during the daytime across Canada and in September 2003, a similar survey was conducted in urban communities. These surveys showed that the seat belt wearing rate in rural areas was lower than in urban communities. Much lower rates of seat belt use were indicated among front seat occupants of light trucks (80 per cent) than of passenger cars (88.9 per cent), and the rate was lower by approximately three per cent for males than that of females and similarly, by age group, among those aged 25 and under. For more information on the above surveys of seat belt use visit: www.tc.gc.ca/roadsafety/tp2436/rs200405/menu.htm, as well as Road Safety's main menu for related vehicle restraints and safety studies and programs (e.g., air bags, booster seats for children, child seats on school buses).

Impaired drivers — Since the late 1980s, the percentage of fatally injured drivers who were tested and found with an alcohol concentration rate in their blood over the legal limit of 80 mg% has declined steadily, from approximately 40 per cent in the late 1980s to approximately 30 per cent in recent years (29.3 per cent in 2002). A similar trend can be seen in police reported charges for impaired driving offences, where the numbers dropped from over 111,000 in the early 1990s to 66,682 in 2002 (most recent data). It is unclear what percentage of these reductions are a result of greater public awareness, tougher penalties or changes in traffic enforcement levels and/or procedures. Addendum Table A4-8 shows this downward trend with a decrease in 2002 (most recent data). The role of drugs, such as cannabis, in collision causation dates back many years, although much less is known about the impact of this drug on collisions. Studies revealing that cannabinoids are the drugs most commonly found (after alcohol) in drivers who have been injured or killed in motor vehicle collisions, have increased concerns both nationally and internationally. Risks related to motor vehicle collisions increase in cases where both alcohol and cannabis are being used by drivers. For more information, please see "Impacts of cannabis on driving: An analysis of current evidence with an emphasis on Canadian data" at www.tc.gc.ca/roadsafety/tp/tp14179/menu.htm.

Commercial Vehicles — Another key RSV 2010 sub-target is to reduce the number of road users killed or seriously injured in crashes involving commercial vehicles (i.e., heavy trucks and buses). Commercial vehicle drivers account for approximately 3.5 per cent of total licenced drivers between 1999 and 2002 (for details, visit www.tc.gc.ca/roadsafety/tp/tp3322/2003/page12.htm), although when compared to passenger vehicles, they generally account for much higher proportions of vehicle-kilometres travelled. From 1999 to 2003, collisions involving commercial vehicles accounted for approximately eight per cent of all road collisions and roughly 20 per cent of all road fatalities. In 2003, 576 fatalities resulted from collisions involving commercial vehicles, down from 581 fatalities in 2002. (For details, see Addendum tables A4-9A and A4-9B). Fatigue is recognized as a factor in transportation accidents. Consequently, a key initiative in recent years has been to revise and modernize the hours-of-service rules (under the consensus-based National Safety Code Standard #9), allowing trucking companies to better manage the fatigue factor in their operations. In December 2004, consensus was reached among key players in the Canadian trucking industry on safety rules for extra-provincial commercial vehicle operations. The Commercial Vehicle Drivers Hours of Service Regulations - Proposed Regulation are available at: http://canadagazette.gc.ca/partI/2003/20030215/html/regle1-e.html. Transport Canada has an ongoing research program on human performance and fatigue management. In 2004, a prototype fatigue management program for commercial drivers was developed to train drivers, dispatchers and company managers about ways to avoid fatigue and to get the best possible rest, at home or on the road. The program will undergo field trials under a 2003 joint research agreement between Transport Canada and Canadian provincial and U.S. authorities. For information on human performance research, see: http://tcinfo/tdc/projects/hfactors/menu.htm.

Addendum Table A4-10 shows that motor vehicle drivers accounted for about half of the 2003 fatalities (2,766), while passengers accounted for about a quarter (23.6 per cent). Although pedestrian fatalities, accounting for 13.7 per cent, increased again in 2003 (from 368 in 2002 to 379 fatalities), a recent study indicates that they decreased by 24.1 per cent over the 1992-2001 ten-year period (416 for this ten-year average). For details, visit www.tc.gc.ca/roadsafety/tp2436/rs200401/menu.htm. As Addendum Table A4-11 shows, of the vehicles involved in fatal collisions between 1999 and 2003, after automobiles, pickup trucks and larger trucks, were motorcycles (at a distant fourth place, accounting for about four per cent), bicycles (in fifth place), and all buses (at sixth place with about one per cent of the total). For more statistics on road safety system performance, visit www.tc.gc.ca/roadsafety/stats/menu.htm.

Marine Safety

In 2004, the number of Canadian registered vessel accidents decreased by 11 per cent in the marine transportation sector with 431 accidents, compared with 485 in 2003 and 462.8 for the previous five-year average. Historically, the majority of marine accidents were shipping accidents and 2004 was no exception. There were 385 shipping accidents, 89 per cent of the total. However, this was a decrease of 11 per cent over 2003 and seven per cent over the previous five-year average. Accidents aboard ship made up the remainder of the 431 Canadian vessel accidents, falling to 46 in 2004 from 53 in 2003 and from the five-year average of 49.2. Of the 406 Canadian vessels involved in a shipping accident, which includes those where more than one vessel was involved (e.g., collision between vessels), fishing vessels represented the largest proportion, with 54 per cent, while commercial vessels followed with 35 per cent. There are approximately 36,700 registered/licenced vessels in Canada (excluding recreational); 64 per cent are fishing vessels, 25 per cent are commercial vessels under 15 gross registered tonnage (GRT), and 10 per cent are vessels over 15 GRT. For details on registered vessels, see: http://www.tc.gc.ca/ShipRegistry/menu.asp?lang=e. The accident rate, based on vessel-kilometres and available only for the commercial vessels of over 15 GRT, fell from 20.5 in 2003 to 17.9 in 2004.

The decrease in marine accidents in 2004 was not reflected in the number of lives lost on Canadian vessels, which increased from 19 in 2003 to 27 and was slightly higher than the previous five-year average (23), as there was a minor rise in the number of multi-casualty occurrences. There were 76 persons injured aboard Canadian vessels in 2004, comparable to both the 2003 total of 78 and the five-year average of 73. A record low of confirmed Canadian vessel losses was reported in 2004. The 17 losses represented less than half of the previous five-year average of 39. For more details, including provincial breakdown of occurrences, which take into account foreign vessels inside Canadian waters (not included in the above total occurrences and rates), as they are reported to the Transportation Safety Board, see Addendum tables A4-12 and A4-13.

One of the key commitments in *Marine Safety's Strategic Plan 2003 – 2010* is to achieve a certain level of safety targets by 2010, based on the 1998 – 2002 five-year averages for Canadian and foreign vessels. These safety targets are focused on the number of fatalities (20 per cent reduction of 33.8), injuries (30 per cent reduction of 80.2), and the Canadian and Foreign flag commercial accident rates (20 per cent reduction of 3.8 and 2.0 respectively). The 2004 figures, indicating early progress against the safety targets, show that there was an 85.8 per cent contribution towards the fatality reduction target, while injuries remained on a par with the 1998-2002 baseline figure and no progress was made. For more information on the plan and safety targets, visit www.tc.gc.ca/MarineSafety/tp/tp13111/menu.htm.

Small Commercial Vessels (fishing and passenger) — The 51 small vessels (<=150 GRT) engaged in commercial operations in 2004, excluding fishing, represented 13 per cent of Canadian vessels involved in shipping accidents. Of these, 25 were engaged in passenger/charter activities. For more details, see Addendum Table A4-14. Canadian small vessels engaged in fishing activities have historically accounted for the highest proportion of the total vessels involved in shipping accidents (52 per cent in 2004). It should, however, be noted that accidents involving these vessels have declined significantly in the last decade, as shown in Addendum Table A4-15. Transport Canada continued to advance the regulatory and safety agenda for small commercial vessels in 2004 through the Marine Safety Small Vessel Monitoring and Inspection Program. Impending amendments to stability and construction standards, life-saving equipment and certification in the Small Vessel Regulations will further enhance safety. In 2004, Transport Canada developed and distributed a Small Commercial Vessel Safety Guide to holders of small commercial vessel licences. In addition, the Canadian Marine Advisory Council (CMAC) Standing Committee on Fishing Vessel Safety, with government and industry representation, continued to address regulatory issues and operator certification and training.

International — As a member of the International Maritime Organization, Canada is required to report casualties for large commercial vessels. In 2004, there was one "very serious" casualty (collision with loss of lives) involving a Canadian vessel. There were eight less serious casualties for Canadian vessels. Accidents involving foreign-flag vessels in Canadian waters continued to decline in 2004 (to 49 from 64 in 2003), as shown in Addendum Table A4-12. Canada is a signatory to two Memoranda of Understanding (MOU) on Port State Control. In 2004, Canada continued to meet its obligation under the MOUs, with 1,173 foreign-flag vessels inspected. Improved targeting and special inspection programs for bulk carriers and tankers have helped improve the safety of foreign ships entering Canadian ports, and trends show that detentions have decreased from five years ago. Marine Safety publishes an annual report on the Port State Control Program that provides comprehensive data on inspections. In 2004, Canada hosted the Second Joint Ministerial Conference of the Paris and Tokyo Memoranda of Understanding (MOU) on Port State Control.

Marine Transportation Safety Management Systems — These systems have been in place since 1998 when they were implemented on a worldwide basis for tankers, bulk carriers and passenger ships in international trade. In 2002, these requirements were extended to almost all vessels trading internationally and are implemented through the Safety Management Regulations. To date, close to 70 Canadian vessels have obtained the required statutory certification; issued by classification societies on behalf of Transport Canada. In 2004, a monitoring program was well established as Transport Canada directly monitored seven of the audits carried out by these authorized organizations, and 26 audit reports were also reviewed. Transport Canada continues to support the voluntary adoption of Safety Management Systems by vessels operating in Canadian waters, and is actively reviewing the feasibility of implementing a Safety Management System for operators of Canadian domestic vessels (including small passenger vessels).

Transfer of Recreational Boating and other responsibilities — The responsibility for the Office of Boating Safety that administers a regulatory program for pleasure craft was transferred to Transport Canada from the Canadian Coast Guard, Department of Fisheries and Oceans in December 2003. In 2004, Transport Canada administered the operator competency program and worked in partnership with the Canadian Coast Guard Auxiliary to deliver boating safety education and awareness programs. The most current data available for recreational boating fatalities show that the 1996 – 2000 five-year average of 199 was higher than the 1991 – 1995 five-year average of 161 fatalities. It should be noted that there are approximately eight million recreational boaters in any given year. The Red Cross maintains comprehensive information on accidents and fatalities relating to pleasure craft at www.redcross.ca. Transfer of other safety related responsibilities from the Canadian Coast Guard include marine navigation services, pollution prevention and response, and navigable waters protection.

Further details on the above initiatives and other safety regimes under the Marine Safety Program can be found at http://www.tc.gc.ca/marinesafety/menu.htm.

Aviation Safety

Preliminary 2004 Canadian-registered aircraft aviation accident figures showed a decrease of 17 per cent in comparison to 2003 figures, from 289 to 241 (excluding ultra-light aircraft). This is a 19 per cent decrease over the 1999-2003 five-year average of 296. The decline is largely attributable to a combined reduction in aerial work accidents, flight training accidents and recreational aviation accidents; however, this decline was partially offset by a 21 per cent increase in air taxi accidents. In 2004, fatal accidents declined (21 compared to 32 in 2003) and the total number of fatalities (34) was notably lower than 2003 (60) and the five-year average (52). The accident rates, based on total hours flown, itinerant movements and the number of aircraft registered, all confirm decreasing rates compared with 2003 and the previous five-year average.

The source of the data this year is the Transport Canada's Flight 2005 database: data that is extracted from the Transportation Safety Board of Canada (TSB) database and then aligned with the Canadian Aviation Regulations (CARs) and towards the Flight 2005 safety targets. The Addendum Table A4-16 provides more details on these occurrences and A4-17 further summarizes occurrences as they were reported to the TSB. Addendum Table A4-18 provides more detail on accident rates, and Addendum Table A4-19 provides a breakdown by province of aviation accidents, fatal accidents and fatalities based on the above data alignment.

The number of commercially operated aircraft involved in an accident (104 in 2004) accounted for 43.2 per cent of the total Canadian-registered aircraft accidents while the rest (140) were Recreational Aviation. Historically, airlines and commuter aircraft account for a small portion of involvement in these accidents. In 2004, Canadian-registered airliners were involved in three accidents. For the fourth year in the row, none of these three accidents and none of the four accidents involving commuter aircraft resulted in fatalities. Commuter aircraft accidents had a notable decline in 2004 from 10 in 2003 to four and declined over the 1999-2003 average of 8.6.

Approximately half (54.8 per cent) of the commercial aviation operations accidents in 2004 involved air taxis. This was consistent with the previous five years. While at 57 accidents, the 2004 figure was notably higher than that of 2003 when there were 47 accidents, it was on par with the previous five-year average of 59. In 2004, of the 57 accidents involving aircraft of this category, five (8.6 per cent) resulted in fatal accidents, causing 18 fatalities. There was a major decline in aerial work accidents (17), (accounting for 16.3 per cent of all 2004 commercial aviation operations) compared with 2003 accidents (41) and the 1999-2003 five-year average (39.8).

Recreational aviation is by far the largest contributor to the number of Canadian-registered aircraft accidents, accounting for 58 per cent of the 2004 total and 55 per cent for the 1999 – 2003 five-year average. In 2004, 140 recreational aircraft (excluding 34 basic and advanced ultra-lights) were involved in an accident, a decrease over the 2003 figure of 152. Of this total, 126 (90 per cent) involved aeroplanes and nine of these (7.1 per cent) were fatal, a decrease over 11.4 per cent 1999 – 2003 five-year average. Approximately one fifth of the total accidents were fatal for the basic and advanced ultra-light aircraft (6 out of 34 in 2004 and 8 out of 37 for the five-year average), making it the highest ratio among all aircraft involved in an accident. It should, however, be noted that this ratio may be influenced in good part by the reporting characteristics for the ultra-light aircraft category.

The number of reportable incidents reported to the Transportation Safety Board involving either a Canadian- or foreign-registered aircraft increased in 2004 to 906 from 834 in 2003. Risk of Collision/Loss of Separation (44 per cent increase over 2003), accounted for less than a quarter of the total reportable incidents (24.5 per cent in 2004), while Declared Emergency accounted for the highest percentage (30.5 per cent) among the categories of incidents. For more details on aviation incidents, please see Addendum Table A4-17.

Flight 2005 — The two main objectives of the Civil Aviation Safety Framework for Canada are: a continued improvement in the high level of aviation safety in Canada; and a high level of public confidence in the country's civil aviation program. Flight 2005 targeted a 25 per cent reduction of the five-year average of accidents and fatal accidents (378.20 accidents and 43.40 fatalities for 1995 – 1999 five-year averages) in all sectors by 2005, while a target of 90 per cent public confidence, measured by public opinion research, was set as the target for the second objective. In 2004, when compared to the 1995 – 1999 baseline, the 104.2 fewer accidents and 9.4 fewer fatalities is a reduction of 110 per cent, exceeding the targets for both accidents and fatalities. A March 2004 EKOS survey, with questions related to flight safety (and excluding questions regarding security) reported a public confidence rating of 98 per cent, and a high confidence rating of 67 per cent, an increase of seven per cent in high confidence over 2002.[1] For more information on Flight 2005, visit http://www.tc.gc.ca/civilaviation/menu.htm.

Safety Management Systems — Implementing Safety Management Systems (SMS) is the cornerstone of the evolving directions of Flight 2005 framework for improving the safety performance within the Canadian Civil Aviation Industry. To date, more than 500 delegated officers have been trained, with SMS training generally well received. In addition, SMS pilot projects have proven to reduce costs through the proactive management of risks. Transport Canada pre-published the first set of Safety Management System Regulations for aviation organizations in the Canada Gazette in March 2005. These regulations will provide aviation organizations with the flexibility to decide how to meet the safety requirements, allowing for innovation while improving safety. A briefing campaign to prepare the civil aviation industry for SMS implementation is being incorporated into regional SMS implementation plans. For more information on SMS, please visit: http://tcinfodev/civilaviation/SMS/menu.htm.

Business Aircraft-Operational Safety Standards System (BA-OSSS) — Industry, through the Canadian Business Aviation Association (CBAA), has also been given flexibility through the BA-OSSS to develop a safety system suited to their individual operations while not compromising safety. These aviation services have historically experienced an extremely low accident rate, averaging less than one accident per year for the last six years. (For details, refer to Private Operator Passenger Transportation operations in the Addendum Table A4-16). The BA-OSSS is made possible through a regulatory approach of performance-based rules linked with a safety management system. The CBAA is currently responsible for issuing operating certificates to these operators. For more information on the Flight 2005 and related initiatives, visit http://www.tc.gc.ca/civilaviation/menu.htm.

Transportation of Dangerous Goods

The number of reportable accidents involving the transportation of dangerous goods was up slightly in 2004 (379) from 2003 (356). However, few accidents involving dangerous goods are actually caused by the goods themselves. Figure 4-3 shows that in recent years most reportable accidents involving dangerous goods did not occur during transport, but rather during the loading or unloading phase at transportation facilities. The majority of deaths and injuries involving the transportation of dangerous goods were caused by the accident (a collision) itself, not the dangerous goods. In 2004, 11 fatalities and 35 injuries resulted from accidents involving dangerous goods. Of these, 12 injuries and one fatality resulted from the dangerous goods themselves.

FIGURE 4-3: TDG REPORTABLE ACCIDENTS BY MODE AND AT TRANSPORTATION FACILITIES, 1995 – 2004

Source: Transport Canada, Dangerous Goods Accident Information System

1 Perceptions of Air Travel Safety and Security in Canada: Wave III EKOS Research Associates, March 2004. Most recent polling data suggest that a high confidence rating has reached the 70 per cent mark further substantiating this increasing change.

There are several ways to measure freight and freight movement: the number of shipments, the weight of the shipment (tonne), the weight and distance of the shipment movement (tonne-kilometre), and the distance over which the shipment traveled (vehicle-kilometre). The measurement method used depends on the end need. There are approximately 30 million shipments of dangerous goods in Canada every year that are subject to the TDG Regulations. Almost all (99.99 per cent) arrive safely at their destinations. As Figure 4-3 shows, among the four modes of transport, most reportable accidents (89 per cent) occur on road. It must be kept in mind, however, that 93 per cent of dangerous goods are shipped using road transportation. When tonnage is used as the unit of measurement of dangerous goods transported in Canada, more than 46 per cent of the volume is transported by road while 39 per cent is transported by rail. The TDG program does not cover dangerous goods transported in bulk on ships or by pipeline. For more information on TDG exposure data, see the October 2004 Transport Canada report entitled "The Movement and Handling of Dangerous Goods in Canada for the Year 2002" (to obtain a copy contact: provencherm@tc.gc.ca). For details on the number of reportable accidents by mode of transport and those accidents resulting in fatalities and injuries, see Addendum tables A4-20A to A4-20C.

Review of the TDG Act — In 2004, the focus of the review was to collect and analyze information aimed at identifying potential safety enhancements to the Act as well as emerging security issues. Public consultations were conducted across the country. Analysis of the issues, alternatives and solutions continues until spring 2005.

Tank Car Thermal Protection Integrity — As a result of the Tank Car Thermal Protection Integrity project, propane tank fire tests and high-temperature steel tests were performed to provide data to validate a 3-D computer model for tank car defects. In 2004, US DOT (Federal Railroad Administration) inspectors were trained in the use of infrared camera technology. Transport Canada inspectors removed tank cars from service due to non-compliance with the thermal protection standard. Meetings and discussions were held with Canadian and United States government and industry officials to plan for fire tests of such tank cars with defective protection systems.

Highway tanker truck stability tests — A research program at the National Research Council has resulted in the testing of approximately 20 different tanker trucks carrying dangerous goods on a tilt-table. A rollover computer model has been developed and validated with the tilt-table data. A user-friendly computer model is envisaged, and work will continue in the development of a rollover threshold standard for highway tanker trucks transporting dangerous goods.

The National TDG Program — This program is delivered across Canada in partnership with provinces and territories under terms defined in Memoranda of Agreement between the federal Minister of Transport and provincial/territorial ministers. In 2004, such an Agreement was concluded with the Province of British Columbia. During the year, Transport Canada held training sessions throughout the country on the TDG Regulations offered to federal, provincial and territorial inspectors.

International harmonization — Transport Canada's aim to harmonize the regulatory requirements across jurisdictions remains an important objective. Transport Canada's TDG is the head of the Canadian delegation to the United Nations (UN) Sub-committee of Experts on the Transport of Dangerous Goods, and acts as the Vice-Chairman of the Sub-committee. Transport Canada's TDG acts as technical advisor to the Canadian representative to the ICAO DGP and the IMO DSC. The impact test for portable tanks that Canada developed was adopted by the UN Sub-committee for the 14th edition of the *Recommendations on the Transport of Dangerous Goods, Modal Regulations* published by the UN.

Emergency Response Guidebook — The Canadian Transport Emergency Centre (CANUTEC) assists personnel in handling dangerous goods emergencies 24 hours a day, seven days a week. Transport Canada's CANUTEC works cooperatively with the United States and Mexico under a NAFTA initiative to develop the "Emergency Response Guidebook" that provides harmonized emergency response procedures. This guidebook is updated every four years, and in 2004 it was distributed to fire departments, police departments and ambulance services. With one book provided for each response vehicle, more than 2,000,000 copies have been distributed throughout the Americas. The guidebook is also available to other countries and has been translated in 17 different languages. For more information on these initiatives, including the review of the *TDG Act*, 1992, visit www.tc.gc.ca/tdg/menu.htm.

TRANSPORTATION SECURITY

In 2004, the security of the national transportation system continued to be strengthened through a number of security enhancements and initiatives. A key component of this is the National Security Policy. This is a strategic framework and action plan designed to ensure that the Government of Canada can prepare for and respond to current and future threats to the security of the transportation system. Through this national policy, the Government of Canada reaffirmed its commitment to ensuring a safe and secure society and to meeting Canada's global responsibilities. The National Security Policy contains three transportation-related deliverables: a six-point plan for marine security; enhancement of aviation security, including air cargo; and improvement and extension of security background check requirements for transportation workers.

As a result of the National Security Policy and a number of programs and activities undertaken by Transport Canada, public confidence in transportation security in all modes has increased. Results of recent public opinion surveys are presented below, followed by an overview of key transportation security initiatives by mode.

Public Confidence

Since September 11, 2001, public confidence in Canada's transportation security regime, particularly aviation security, has increased:

- A majority of Canadians (61 per cent) rated the safety and security of the air mode of transportation as "high".[2]
- The percentage of Canadians, who agree that there are sufficient security procedures in place to protect air travellers, even if they cannot see them, increased by five percentage points from 2002 to 71 per cent. Recent polling suggests that this percentage has further increased to 76 per cent.[3]
- The percentage of travellers who feel that passenger screening is "very thorough" has increased from 34 per cent in 2002 to 43 per cent in 2004 (see Figure 4-5).[4]
- Over half of Canadians (53 per cent) now agree that the federal government has done everything reasonable to ensure the safety of air travel in Canada.[5]
- The majority of Canadians (77 per cent) have a moderate and high confidence in the federal government's ability to prevent terrorist attacks against Canada's airports.[6]

FIGURE 4-4: CONFIDENCE IN SECURITY TO PROTECT AIR TRAVELLERS

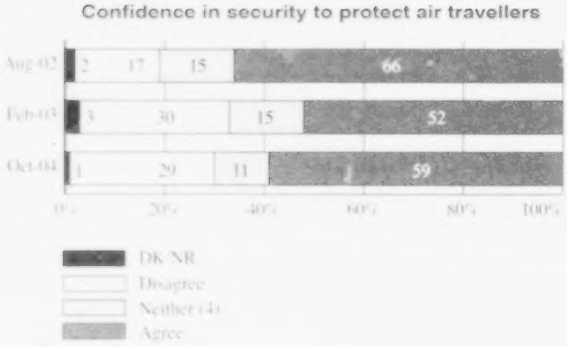
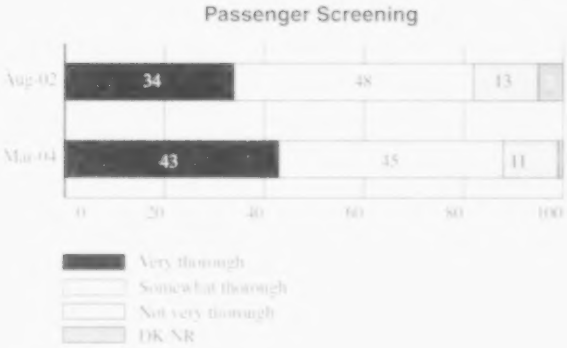


FIGURE 4-5: PASSENGER SCREENING



2. Rethinking Government 2004 – Wave 4 Report, EKOS Research Associates (February 2005).
3. Perceptions of Air Travel Safety and Security in Canada: Wave III, EKOS Research Associates (March 2004).
4. Perceptions of Air Travel Safety and Security in Canada: Wave III, EKOS Research Associates (March 2004).
5. Public Security Monitor 2004 – Wave 5: Looming Challenges – Privacy, Risk, and Canada-U.S. Relations, EKOS Research Associates (October 2004).
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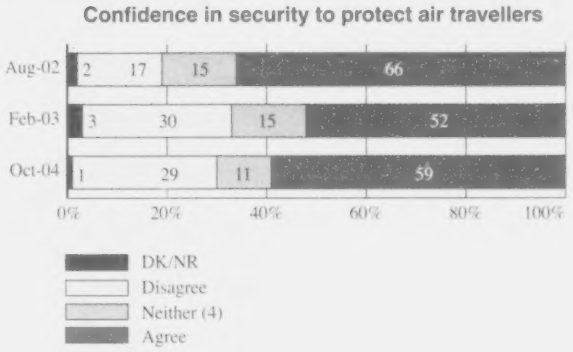
FIGURE 4-4: CONFIDENCE IN SECURITY TO PROTECT AIR TRAVELLERS

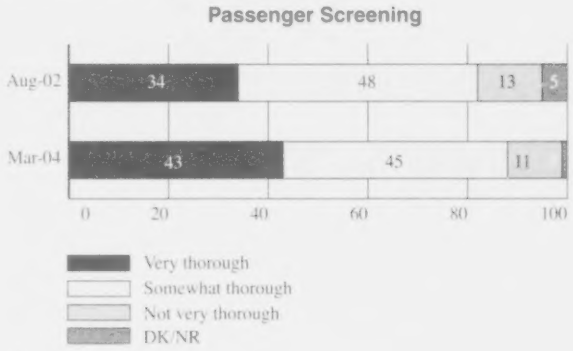
"Even if I cannot see them, I am confident there are sufficient security procedures in place to protect air travellers"



Note: Margin of error: +/- 3.1%
Source: EKOS Research Associates Inc.

FIGURE 4-5: PASSENGER SCREENING

"Thinking of the last time you travelled by air, how would you rate the thoroughness of the passenger screening? Would you say that it was ..?"



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2 Rethinking Government 2004 – Wave 4 Report, EKOS Research Associates (February 2005).
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Aviation Security

In 2004, Transport Canada continued to strengthen aviation security, working with other federal government departments, other countries and international organizations, industry stakeholders and labour organizations.

Important initiatives in 2004 included:

- legislative and regulatory enhancements;
- programs such as the Cabin Security Enhancement Contribution Program and the Aviation Transportation Security Clearance Program;
- awareness campaigns and industry training initiatives; and
- international initiatives.

Legislative and Regulatory Enhancements

To augment the rigorous security standards already in place, Transport Canada introduced new legislation and regulations.

A key legislative development was the *Public Safety Act*, which strengthens and clarifies aviation security and safety provisions in the *Aeronautics Act*, which received Royal Assent on May 6. The *Act* is designed to further enhance aviation security by increasing Canada's capacity to prevent terrorist attacks, protect citizens and respond quickly should a threat be identified. For instance, it gives government departments the ability to request passenger information in order to stop individuals who pose a threat to transportation security from boarding a flight.

A number of regulations were also amended or introduced in 2004:

- The development of a regulatory framework for a new airport-screening program for non-passengers. The new screening program is implemented by the Canadian Air Transport Security Authority (CATSA). Under the program, non-passengers — such as airline personnel, airport employees, refuellers, flight crews, caterers, aircraft groomers, maintenance personnel and ground handlers — are subject to random screening when they enter restricted areas at major airports.
- Amendment of the Canadian Air Transport Security Authority Aerodrome Designation Regulations. The amendments extend security screening by CATSA to Mont-Tremblant International Airport in Quebec and Red Deer Regional Airport in Alberta. Security screening at Mont-Tremblant International opens up new tourism opportunities by allowing direct flights from untapped American markets. Security screening at Red Deer Regional offers this growing community and its visitors more opportunity to fly to national and international metropolitan centres.
- The development of new requirements for the installation and operation of advanced explosives detection system equipment at airports.
- The development and implementation of Special Location Security Measures. These are site-specific regulations aimed at reducing security risks, if any, associated with new routes between Canada and international locations. Transport Canada began this initiative in cooperation with other government departments.
- Operational trials of different policing models. This came out of a 2003 assessment of aviation security policing requirements, whereby Transport Canada would introduce enhanced requirements at other airports, using a risk-based approach. Transport Canada laid the groundwork for these trials, which, in conjunction with stakeholder consultation, will help shape the enhanced requirements.
- Enhancements to aviation security training requirements for crew members. The requirements are designed to help identify and address potential threats to civil aviation, including hijacking and bomb threats, and outlines processes around the presence of aircraft protective officers.

Cabin Security Enhancement Contribution Program (CSECP)

Following the events of September 11, 2001, new regulations to reinforce cockpit doors on Canadian-registered aircraft were introduced to provide further protection to flight crews and Canadian air travellers. The reinforced doors will prevent forcible intrusions into flight crew compartments by would-be hijackers and, in turn, increase public confidence in Canada's civil aviation system. Transport Canada's Cabin Security Enhancement Contribution Program (CSECP) provided financial assistance to Canadian operators required to modify aircraft to comply with the regulations. There were 28 operators with 486 eligible passenger and cargo aircraft in the program. The CSECP officially ended on March 31, 2004.

Aviation Transportation Security Clearance Program

In 2004, Transport Canada continued to implement the Aviation Transportation Security Clearance Program, which is aimed at reducing the risk of unauthorized persons entering restricted areas of an airport. This program uses the Transport Canada Automated Fingerprint Identification

System (TCAFIS) to modernize and speed up processing times for aviation transportation security clearances, thus making airport security more effective and efficient. Transport Canada won the 2004 Government Technology Exhibition in Canada's (GTEC) Award (gold) for this initiative in the Information Management Excellence in the Public Sector category. In addition, Transport Canada was selected as a semi-finalist for the Webber Seavey Award, which is sponsored jointly by the International Association of Chiefs of Police (IACP) and Motorola. This is the most prestigious award within the international police community and is presented annually to law enforcement organizations worldwide to recognize the fight against terrorism and dedication to the quality of life in local communities.

Awareness Campaigns and Industry Training Initiatives

Transport Canada conducted a number of awareness campaigns in 2004 aimed at airport employees and air carriers. Campaigns were carried out in cooperation with the Canadian Aviation Security Awareness Advisory Committee (CASAAC), which includes Transport Canada, Canadian Air Transport Security Authority (CATSA), the Canadian Airports Council (CAC), the Air Transport Association of Canada (ATAC) and NAV CANADA.

One of the key awareness campaigns in 2004 was the Air Cargo Security Awareness Campaign. Through this campaign, Transport Canada distributed:

- 60,000 brochures to air carrier employees and 20,000 posters to air carriers, entitled "Securing Our Future Together"; and
- 6,000 security awareness posters to air carrier and freight forwarders, entitled "Report All Suspicious Activity."

In 2004, Transport Canada also updated the "Transport Canada Cargo Screening Training Program" and video, aimed at air cargo handlers, air carrier representatives and the travelling public. Developed through a joint working group with industry representatives, the program was well received by the air cargo industry and industry associations.

Phase I of the Air Carrier Security Training Project was completed in 2004, and included enhancements to aviation security requirements for crew members and other persons conducting searches on aircraft, food containers, and aircraft stores. In parallel, and in consultation with industry stakeholders, Transport Canada developed guidance material to assist air carriers in the development of their aviation security operational procedures and training programs for crew members.

International Initiatives

Transport Canada cooperates with a number of countries and international agencies to enhance aviation security and align Canadian and international standards. In 2004, Transport Canada continued to work with such international agencies as the G8, the International Civil Aviation Organization (ICAO), the European Civil Aviation Conference (ECAC) and the U.S. Department of Homeland Security and the U.S. Department of Transportation.

Key international initiatives included:

- The Secure and Facilitated Travel Initiative (SAFTI). This was agreed to by G8 nations in June 2004. Its objective is to deter threats, reduce costs, and help ensure safe and efficient movement of passengers and cargo, thereby benefitting international commerce while enhancing security. In addition to SAFTI, a 24/7 aviation point of contact network was created to address imminent threats, and methodologies were prepared for assessing the vulnerability of G8 airports to the Man-Portable Air Defence Systems (MANPADS) threat.
- The ICAO's Universal Security Audit Programme (USAP). This program is designed to promote aviation security worldwide by evaluating and assisting its 188 Member States in correcting security deficiencies. Transport Canada co-chairs this initiative and has contributed inspectors to support it. Because of its recognized expertise, Transport Canada also trains inspectors worldwide to work on inspection teams. These inspection teams help identify potential deficiencies in security oversight systems of member countries and make recommendations to resolve any deficiencies.
- Transport Canada's participation and chairing of the ICAO Aviation Security Panel and the 15th meeting of the Ad Hoc Group of Specialists for Detection of Explosives. Transport Canada also actively participated on the ECAC Technical Task Force for aviation security. Participation in these initiatives is aimed at enhancing explosives detection capabilities and the alignment of Canadian and international standards.
- Continued cooperation with the U.S. departments of Homeland Security and Transportation. The goals of this cooperation are to jointly manage aviation security issues and align regulatory requirements. Transport Canada also continued to participate in a Counter Terrorism Bilateral agreement with the U.S. Department of Homeland Security.

Marine Security

Throughout 2004, Transport Canada made significant progress toward enhancing marine security.

In order to put the International Ship and Port Facility Security (ISPS) Code into effect in Canada, and to enable Canada to meet its international obligations, Transport Canada developed Marine Transportation Security Regulations (MTSRs) in consultation with the Canadian marine sector. The MTSRs came into force on July 1, 2004.

The Canadian regulations apply to those vessels and marine facilities covered by the ISPS Code — certain vessels of 500 gross tonnes or more engaged in international voyages, and the marine facilities that serve them — as well as to certain domestic vessels between 100 and 499 gross tonnes that engage in international voyages or trade in the Great Lakes–St. Lawrence Seaway System.

To date, all affected Canadian-flagged vessels and Canadian marine facilities have been issued appropriate certificates of compliance. All compliant facilities are now listed on both the International Maritime Organization (IMO) Web site and Transport Canada's marine security Web site.

Marine Security Operation Centres (MSOCs) have been established on the east and west coasts (i.e., in Halifax, Nova Scotia, and Victoria, British Columbia). The MSOCs actively target vessels to ensure compliance with the ISPS Code and to help other government departments in maritime domain awareness. They are managed by the Department of National Defence with Transport Canada's active support.

As a result of the promulgation of the *Public Safety Act*, the Government of Canada was able to announce a $115 million Marine Security Contribution Program to help ports and port facilities make security enhancements associated with meeting the ISPS Code. Over the next three years, this program will help fund projects for such initiatives as the purchase of surveillance equipment, including cameras and closed-circuit TV systems; improvements to dockside and perimeter security and access control, such as fencing, gates, signage and lighting; and other port security enhancements, such as security guards and arrangements with local police departments.

Transport Canada also began consultations on the Marine Facilities Restricted Area Access Clearance Program. This proposed program is designed to prevent unlawful acts of interference with the marine transportation system by requiring background security checks for port workers who need to access certain restricted areas or who occupy certain designated positions at marine facilities. This program would build on the experience gained from Canada's program of background security checks for airport personnel introduced in October 1985. It is expected that this program will be in place as early as possible in 2005.

For more information on how Transport Canada is working to enhance marine security in Canada, visit http://tcinfo/vigilance/en/security_emergency_preparedness/marine/menu.htm.

Surface Security

Rail Security

Following the March 2004 train bombings in Madrid, Spain, Transport Canada stepped up its efforts related to rail security. In cooperation with the Railway Association of Canada, Transport Canada began a comprehensive review of rail security and the current self-regulatory regime. It also organized nationwide teleconferences with federal railway security officials as well as the major mass transit systems, which do not fall under federal jurisdiction. The teleconferences promoted best practices and shared learning experiences about security programs. In addition, a Railway Intelligence Forum was held with CN, CPR and VIA Rail to discuss security concerns.

Transport Canada also cooperated with the U.S. Transportation Security Administration to further enhance rail security by sharing information on new security programs and different types of technologies being deployed.

Intermodal Cargo Security

The security of containerized cargo moving intermodally and internationally is becoming a major transportation security concern internationally. This is expected to continue, and Canada needs to play an appropriate role in ensuring the security of this aspect of the national transportation system.

In 2004, Transport Canada, Public Safety and Emergency Preparedness Canada, and Canada Border Services Agency continued to collaborate with the provincial governments of Quebec and Nova Scotia and U.S. Working Group members to develop a Canada–U.S. Cargo Security Project. This project would use technology to track the movement of cargo containers and detect any security breaches to the containers as they move through the transportation system.

Critical Infrastructure Protection and Emergency Preparedness

National Critical Infrastructure Assurance Program (NCIAP)

Canada and Canadians depend on a network of physical and computer-based infrastructures that provide essential energy, transportation and communications, as well as safety, financial, health and emergency response services. These infrastructures — collectively referred to as National Critical Infrastructure, or NCI — are essential to the health, safety, security and economic well-being of Canadians and to the effective functioning of governments. Under the National Critical Infrastructure Assurance Program, Transport Canada and 11 other federal government departments strive to:

- achieve an effective national emergency management system;
- enhance protection and survivability of critical infrastructure; and
- reduce loss of life and property resulting from major disasters, accidents or intentional acts.

Transport Canada's role is to help protect Canada's key transportation facilities, services, assets and information. In 2004, Transport Canada continued to contribute to critical infrastructure activities through awareness sessions with stakeholders and other provinces. Transport Canada worked with New Brunswick in a federal–provincial sponsorship to develop a Critical Infrastructure Assurance Program that could be used by other provinces. Transport Canada provided input to threat, risk and vulnerability assessments on cross-sectoral infrastructure in order to determine common binational research and development opportunities, through workshops held in Canada and the United States.

Emergency Preparedness Activities

Transport Canada's legislative civil emergency preparedness roles and responsibilities include participation in NATO activities. As the Canadian delegate, Transport Canada provided technical expertise at meetings of the Planning Boards and Committees (PB&C) in 2004. One of the key issues was harmonization of the Aviation and Marine War Risk Insurance Schemes across NATO member states. The issues and recommendations considered at the Senior Civil Emergency Planning Committee are often those that have benefitted from the contributions made by representatives of the Canadian government, including members of Transport Canada, who regularly attend meetings of the RB&C.

Transport Canada is also involved in supporting other government departments in emergency preparedness initiatives, such as the Pandemic Influenza Preparedness Strategy. Although this initiative is led by Health Canada – Public Health Agency (PHA), Transport Canada has committed support functions to help the PHA in the event of a health outbreak. In early 2004, the PHA released the Canadian Pandemic Influenza Plan, which was developed collaboratively with the provinces and territories. The Plan maps out how Canada would prepare for, and respond to, a pandemic influenza outbreak. It created a framework that guides the actions of all levels of government and includes an emergency response plan, as well as guidelines and checklists to help all jurisdictions with their emergency planning.

Transportation of Dangerous Goods

Transport Canada began implementing the Chemical, Biological, Radiological and Nuclear (CBRN) Response Project for the transportation of dangerous goods in 2002. The goal of this Project is to secure access to trained industrial emergency response teams that, when requested by authorities, are capable of helping first responders handle dangerous goods used as CBRN agents in terrorism situations in Canada.

The Project is based on the network of existing responders that has been developed over the years under the *Transportation of Dangerous Goods Act's* Emergency Response Assistance Plan requirements. These responders routinely provide assistance to first responders in handling dangerous goods involved in transportation accidents and are therefore appropriately trained and equipped.

In 2004, Transport Canada organized two-day CBRN awareness sessions for industry responders in Halifax, Toronto, Edmonton, Montreal and Vancouver. Topics included awareness of chemical, biological and radiological materials, as well as overview and recognition of CBRN incidents, incident scene attendance, and the respective roles and responsibilities of the responders and the authorities in charge at the scene.

Transport Canada continued to establish contacts with various key federal and certain provincial departments to develop linkages and/or partnerships to ensure successful implementation of the CBRN Response Project.

TRANSPORTATION AND THE ENVIRONMENT

5

Levels of green house gas emissions from freight transportation have increased, however, emissions grew at lower rate than the increase in activity level.

Overview

Although transportation provides many economic and social benefits, the movement of people and goods can have significant environmental consequences, which in turn have social and economic repercussions. Sustainable transportation calls for ensuring that the environment is considered along with economic and social factors in transportation decision-making. Environmental impacts from transportation include air, water and noise pollution, greenhouse gas (GHG) emissions, and the loss of agricultural land and wildlife habitat. A range of transportation activities contributes to these pressures, including: constructing and financing infrastructure; operating airports and ports; operating and maintaining the road system; producing, operating, maintaining and disposing of vehicles; and supplying of energy and fuel.

The different sectors that make up Canada's transportation system are under the jurisdiction of all three levels of government. The federal government has jurisdiction over most international and interprovincial transportation, while provincial governments are responsible for intraprovincial transportation. Municipalities largely govern urban transportation systems. Coordination of these different levels is conducted by the Council of Ministers Responsible for Transportation and Highway Safety.

Transport Canada's Role

Transport Canada's mandate is to provide the best transportation system for Canada and Canadians — one that is safe and secure, efficient, affordable, integrated and environmentally friendly. The authority of the Minister of Transport Canada to affect environmental issues is through various Acts, including the *Navigable Waters Protection Act*, *Arctic Waters Pollution Prevention Act*, *Canada Shipping Act*, *Motor Vehicle Fuel Consumption Standards Act* and *Transportation of Dangerous Goods Act*. In carrying out its mandate, Transport Canada works with other federal departments to promote sustainable transportation. Significantly, it collaborates with Natural Resources Canada to promote the production and use of alternative fuels and to introduce fuel efficiency technologies. Air emissions from the on-road and off-road sectors are regulated by Environment Canada.

In order to set a positive example and to reduce its own environmental impacts, Transport Canada has increasingly been integrating environmental considerations into daily planning and decision-making. To achieve this objective, Transport Canada has adopted an Environmental Management System, or EMS, an approach that has been used by governments and private companies around the world to ensure environmentally sound practices and to minimize liability.

Environmental Trends in Transportation

Transportation is an important contributor to Canada's economy. The benefits of transportation systems should be weighed against their impacts on the environment. An obvious impact, for example, results from using energy to propel our vehicles, whether on land, on water or in the air. The challenge is to reduce the transportation-related impacts on the environment while still achieving the objectives of mobility and access that transportation systems afford.

This section will illustrate the most recent trends in both GHG and criteria air contaminants (CAC) emissions related to transportation. It will show that despite growth in transportation services, improvements have been made in particular areas while challenges remain in others.

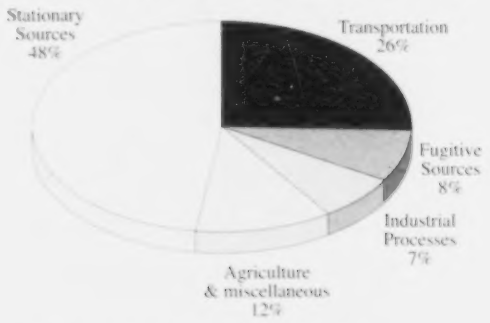
Climate Change and Greenhouse Gas Emissions

Climate change is a major challenge for transportation, as it is for all other sectors of the Canadian economy. Climate change is caused by increases in GHG emissions, which may significantly alter weather and climate patterns around the world, thus increasing the frequency of severe weather events and enhancing the risk of weather-related disasters. However, attempts to reduce GHG emissions in the transportation sector must recognize that transportation is a derived demand and that mobility makes an important contribution to the Canadian economy.

Total Canadian GHG emissions in 2002 were 731 megatonnes (Mt), a 2.1 per cent increase from 2001. Figure 5-1 shows that the transportation component of total emissions was 26 per cent, or 190 Mt. This is up slightly from the 2001 level of 187 Mt (also 26 per cent of total emissions). On-road emissions accounted for 72 per cent of total transportation emissions, domestic air-related emissions accounted for seven per cent, and rail and domestic marine both accounted for three per cent. The remaining transportation-related emissions, off-road and pipelines, accounted for a combined 15 per cent of total GHG emissions in 2002.

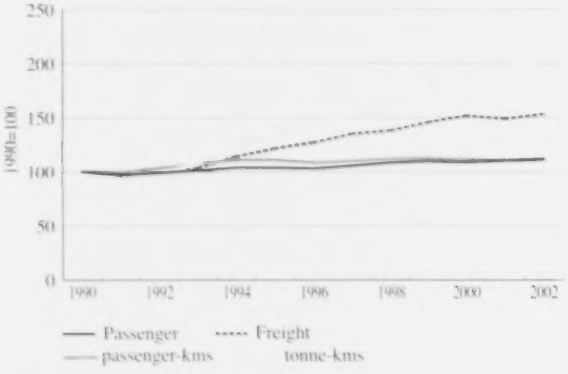
Figure 5-2 shows the trends from 1990 to 2002 in on-road GHG emissions and activity levels from the passenger and freight sectors (1990 levels indexed to 100). Emissions from on-road passenger travel increased by roughly 12 per cent over this period, from 69 to 77 Mt. Activity levels measured by passenger-kilometres increased by the same amount as tracked GHG emission levels throughout this period.

FIGURE 5-1: TOTAL GHG EMISSIONS BY SECTOR, 2002



Source: Canada's Greenhouse Gas Inventory, 1990-2002, Environment Canada

FIGURE 5-2: TRENDS IN GHG EMISSIONS AND TRANSPORTATION ACTIVITY, 1990 – 2002

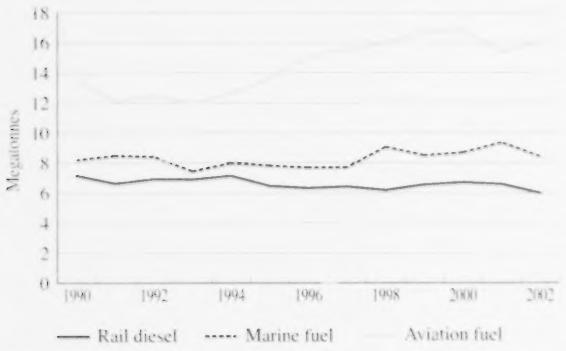


Source: Energy Use Handbook, June 2004, NRCan, OEE

By contrast, Figure 5-2 also shows that GHG emission levels for on-road freight increased by 53 per cent, from 33 to 51 Mt, from 1990 to 2002. While this represents a significant increase in GHG emissions compared with passenger emissions, it should be viewed within the context of the large increase in freight activity levels over this period, when freight activity, measured in tonne-kilometres, more than doubled (103 per cent). This indicates that while freight is accounting for increasing levels of GHG compared wth passenger travel, it is also becoming more efficient by decoupling GHG emissions from activity to a greater extent than on-road passenger travel.

Figure 5-3 shows the trends in GHG emissions from the rail, aviation and marine sectors for the 1990 – 2002 period. After the on-road sectors, the aviation sector had the largest share of transportation sector GHG emissions, with 16 Mt in 2002. Since 1990, aviation GHG emissions have increased by 18 per cent. This increase occurred while airlines were employing more fuel-efficient aircraft as well as larger aircraft with increased load factors. At eight Mt, the marine sector was the next largest contributor to GHG emissions; overall, marine emissions have been relatively constant over this period, with only a three per cent increase. The rail sector was responsible for six Mt in 2002, and unlike the other sectors, has had declining GHG emissions since 1990 (16 per cent reduction). This is especially impressive considering that rail freight activity levels have increased by 28 per cent since 1990. As reported in last year's Annual Report, this could be due to a combination of factors, such as technological improvements to locomotives during the late 1990s, the adoption of new operating practices, and the rationalization of Canadian National and Canadian Pacific's fleets.

FIGURE 5-3: RAIL, AVIATION, MARINE GHG EMISSIONS, 1990 – 2002



Source: Energy Use Handbook, June 2004, NRCan, OEE

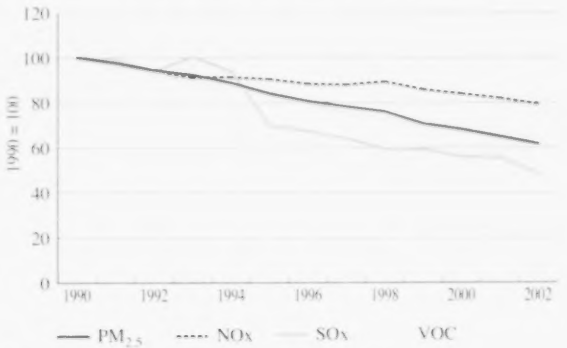
Air Pollution Emissions

Roughly eight out of ten Canadians live in urban areas. This, along with the associated concentrations of economic activity in urban areas, is putting pressure on the air, land and water. This section examines trends in transportation-related air emissions.

Air pollution emissions represent a significant environmental and health issue for Canadians. These emissions include pollutants such as nitrogen oxides (NOx) and sulphur oxides (SOx); volatile organic compounds (VOC) such as gasoline fumes and solvents; and particulate matter (PM_{10} or $PM_{2.5}$). They are emitted from a wide range of sources, including the transportation system. Perhaps the most visible impact is urban smog, which has been linked to several thousand premature deaths in Canada each year, as well as to numerous health-related problems. Smog is composed of two main ingredients: ground-level ozone and particulate matter. Ground-level ozone is created when NOx and VOC react together under specific conditions, such as calm, sunny days. NOx, along with SOx, are also the components of acid precipitation. Particulate matter is produced during the combustion of fossil fuels, including motor vehicles, industrial processes and power plants. Dust from paved and unpaved roads and road construction as well as forest fires are also major sources of particulate matter.

The transportation sector as a whole accounts for roughly 60 per cent of total Canadian NOx emissions, 26 per cent of VOC emissions, seven per cent of fine PM emissions and four per cent of SOx emissions. It should be noted that fuels vary considerably in terms of the emissions to which they give rise. For example, on-road and off-road diesel engines account for roughly 75 per cent of $PM_{2.5}$ emissions (off-road diesel use alone accounts for 53 per cent) and 58 per cent of NOx emissions. Gasoline engines, on the other hand, account for 86 per cent of transportation-related VOC emissions. Figure 5-4 illustrates the trends in transportation-related $PM_{2.5}$, SOx, NOx and VOC emissions (1990 trends indexed to 100). Since 1990, the trend in all of these emissions has been downward, thanks largely to regulatory changes introduced by the federal government to reduce the health impacts of smog and the impacts of acid rain.

FIGURE 5-4: AIR POLLUTION EMISSIONS FROM THE TRANSPORTATION SECTOR, 1990 – 2002



Source: Environment Canada, 2000 Criteria Air Contaminant Inventory

Congestion affects the environment through the additional time required for commuting or for goods movement and the increased time spent by vehicles idling in heavily congested areas. The consequences include increased environmental, social and economic costs, such as foregone paid work, lost time and productivity, wasted fuel, increased GHG emissions, air and noise pollution, and increased stress. Canada relies heavily on exports and imports, especially to and from the United States. This movement of goods and people requires reliable and timely traffic flows at border points, as well as the efficient movement on our highways, rail yards, airports and ports. The costs of congestion have been estimated to be in the billions of dollars annually for the Canadian economy.

The design of low-density urban areas can have an impact on the environment through increased infrastructure needs, including investment in roads. The benefits to Canadians of such development can include lower housing costs and greater access to green space. However, so-called "urban sprawl" also means longer commuting times with the associated increase in harmful emissions.

Federal Initiatives

Federal government departments introduced a number of new initiatives in 2004, many focussed on Canada's urban transportation areas. These initiatives targetted passenger and freight transportation as well as other transportation modes such as air and water transportation. These initiatives are highlighted below.

The One-Tonne Challenge

Launched on March 26, 2004, the One-Tonne Challenge is a three-year, $45 million social marketing campaign that provides Canadians with information and tools to help them take action to reduce their own GHG emissions by one tonne — at home, at the office and when travelling. Complementary initiatives under the program include partnerships with various groups and communities such as educators and youth to raise awareness of the Challenge and engage Canadians to take action. An $8 million print and television advertising campaign was launched in December 2004.

Announcement of Hydrogen Highway

As an important part of the $215-million initiative to stimulate the development and commercialization of hydrogen and fuel cell technologies, the federal government announced the development of the first Canadian Hydrogen Highway on April 1, 2004. Targetted for full implementation by the Whistler 2010 Olympics, the Hydrogen Highway will attract international attention and be a showcase of sustainable transportation, creating a highway with hydrogen fuelling infrastructure that will allow visitors to travel via fuel cell vehicles between the Vancouver Airport and Whistler for the 2010 Olympics.

SUSTAINABLE DEVELOPMENT STRATEGY

On February 16, 2004, Transport Canada tabled its third Sustainable Development Strategy in Parliament. The strategy defines seven strategic challenges and 32 specific commitments for action over the next three years (2004 – 2006). In 2004, Transport Canada wrapped up the 2001 – 2003 Sustainable Development Strategy and initiated the implementation of the 2004 – 2006 strategy. The department reports on its progress annually within the Departmental Performance Report and in the Sustainable Development Strategy Progress Report. Both are available on-line at www.tc.gc.ca/publications/en/menu.htm and www.tc.gc.ca/SDS, respectively.

Transport Canada's Sustainable Development Strategy demonstrates the department's long-term commitment to work with partners in order to achieve sustainable transportation in Canada.

Urban Initiatives

The Urban Transportation Showcase Program

The Urban Transportation Showcase Program (UTSP) is a $40 million initiative to demonstrate and evaluate the impacts of integrated strategies for reducing GHG emissions from urban transportation. The program evaluates the effects of these strategies on GHG emissions, as well as on other urban challenges such as air pollution, congestion, urban form and land use, operating costs and increased active transportation (e.g. cycling, walking). Information on sustainable urban transportation from the showcase demonstrations and other sources is disseminated via learning events, Internet communications, publication of case studies, and transportation awards to encourage the replication of successful strategies across Canada.

In 2004, five municipalities began implementation: Halifax, Waterloo, Toronto/Hamilton, Whitehorse and Vancouver. For more information, visit www.tc.gc.ca/programs/environment/utsp/menu.htm.

THE MOVING ON SUSTAINABLE TRANSPORTATION (MOST) PROGRAM

Since it started in 1999, the MOST program has funded 74 projects aimed at encouraging sustainable transportation practices among Canadians. Originally slated to last three years and allocated roughly $1 million, MOST was extended in 2004 until fiscal year 2007 and given $2.5 million in additional funding in response to ongoing demand for the program.

Seventeen new projects totalling $714,524 were approved for funding in 2004, for a total of 40 ongoing projects during the course of the year. These projects represent a wide variety of initiatives, ranging from car sharing to quantifying the positive impacts of teleworking. An annual review rolled up the six completed projects, including The Sheltair Group's cities^{PLUS}, a 100-year sustainability plan that won the Grand Prix at the International Competition for Sustainable Urban System Design.

Public Transit

Over the course of 2004, the federal and provincial governments announced a number of investments in public transit. Funding for these projects came from the Canada Strategic Infrastructure Fund to support increased transit ridership that encourages a more environmentally sustainable transportation system.

The October 2004 Speech from the Throne affirmed the Government of Canada's commitment to bring forward a New Deal for Cities and Communities. A component of the New Deal includes allocating federal gasoline tax revenue for environmentally sustainable municipal infrastructure such as public transit and rehabilitation of roads and bridges. For more information, please see the Chapter 7 — Road Transportation.

Also in 2004, Environment Canada partnered with the Canadian Urban Transit Association (CUTA) to deliver a national urban transit bus retrofit program. This program will enable up to 240 older, higher-polluting urban busses to be retrofitted with diesel oxidation catalysts. This will reduce emissions of PM by 20 per cent, carbon monoxide by 40 per cent and hydrocarbons by 50 per cent.

In December 2004, Transport Canada invited employees of all federal government departments and agencies in the National Capital Regional to enroll in the Transit Pass Program. Enrollment is being phased across departments over the coming year. The Transit Pass Program enables employees to purchase a transit pass through a monthly payroll deduction (with OC Transpo) at a reduced price or through a pre-authorized payment (with the Société de transport de l'Outaouais). Participating employees save 10 to 15 per cent (10% for STO and 15% for OC Transpo) and gain the convenience of an annual transit pass.

RELEASE OF SUSTAINABLE TRANSPORTATION PLANNING TOOL

On November 8, 2004, Transport Minister Jean Lapierre announced the release of TransDec, a new software tool that will give organizations considering investing in urban transit projects the ability to include environment factors in their cost/benefit analysis. This software will help transportation planners make more environmentally friendly urban transit decisions.

TransDec provides a framework for analyzing a wide range of prospective transit investments, as well as rehabilitation and maintenance work. The framework applies to various transit modes, including bus systems, light rail, heavy rail, commuter rail and highways.

Canadian governments, transit authorities, universities, non-governmental organizations and independent contractors working for these organizations can use the software free of charge. For more information, visit www.tc.gc.ca/programs/Environment/EconomicAnalysis/model/menu.htm.

Advanced Technology Vehicles Program

The goal of the Advanced Technology Vehicles Program (ATVP) is to support Transport Canada's efforts to reduce GHG emissions in the transportation system. As of December 2004, the ATVP has assessed 94 vehicles for their fuel efficiency, emissions and safety performance. This includes the Mercedes-Benz Smart Car, which was introduced to the Canadian market on October 4, 2004. This fuel-efficient car gets 3.8 litres/100km on the highway and 4.6 litres/100km in the city. In addition, 4.8 million Canadians have been reached through a program of 105 special events undertaken to showcase advanced technology vehicles and to raise public awareness of advanced technology vehicles.

Freight Transportation

Freight Efficiency and Technology Initiative

The Freight Efficiency and Technology Initiative (FETI) is led by Transport Canada in collaboration with Natural Resources Canada and is designed to reduce the growth of GHG emissions from freight transportation. It has three components: the Freight Sustainability Demonstration Program (FSDP); voluntary performance agreements between the federal government and modal associations to improve fuel efficiency and reduce GHG emissions; and information-sharing initiatives with the freight industry. In 2004, the FSDP allocated approximately $1.2 million for eight new demonstration projects, bringing the total to $2.7 million for 23 projects. Two demonstration projects were completed, and 11 began implementation following the signature of contribution agreements during the summer and fall months. FETI co-funded and/or organized two industry events to promote understanding and actions in support of sustainable freight transportation.

An agreement in principle was reached with the Air Transport Association of Canada (ATAC) to voluntarily reduce GHG emissions in the aviation sector. This will be accomplished through a 24 per cent improvement in energy efficiency by 2012 compared with a base year of 1990. This target will be confirmed in a memorandum of understanding (MOU) in 2005.

Freight Incentives Program

Launched as part of the Climate Change Plan for Canada, the Freight Incentives Program (FIP) provides financial incentives to purchase and install efficiency-enhancing technologies and equipment in the air, rail and marine modes. In 2004, the FIP had its first annual submission deadline, and approximately $1.5 million was allocated toward four projects. Other work under this program includes the examination of marine shore power to reduce ship idling at terminals and an awareness program for shippers and freight forwarders.

Air Quality

Proposed amendments to the Sulphur in Diesel Fuel Regulations were published on October 2, 2004. They introduce limits for sulphur in off-road, rail and marine diesel fuels and are aligned with the levels and timing requirements passed by the U.S. Environmental Protection Agency in June 2004. The interim limit of 150 mg/kg of sulphur set under the Sulphur in Gasoline Regulations ended December 31, 2004. The final average limit of 30 mg/kg came into effect on January 1, 2005. Between 2002 and 2003, the national average sulphur content in gasoline has declined 55 per cent.

In May 2004, the federal government proposed the Off-Road Compression-Ignition Engine Emission Regulations, which will introduce emission standards for diesel engines, such as those used in construction and agricultural machines, starting in 2006. It is estimated that there are more than 12 million engines in off-road vehicles and equipment in Canada. Environment Canada also initiated consultations on its planned Marine Spark-Ignition Engine and Off-Road Recreational Vehicle Emission Regulations, which will introduce emission standards for recreational marine engines and vehicles. For more information, visit Environment Canada's CEPA Registry Web site at www.ec.gc.ca/CEPARegistry/default.cfm.

Water Issues

In December 2003, a decision was made to transfer responsibility for the *Navigable Waters Protection Act* (NWPA) from Fisheries and Oceans Canada (DFO) to Transport Canada. The transfer took effect on March 29, 2004. With the transfer, TC is now responsible for conducting environmental assessments (EA) pursuant to the *Canadian Environmental Assessment Act* for projects triggered by the NWPA. The number of EAs TC now conducts on an annual basis has increased significantly and includes a number of major assessments, hydroelectric projects, liquefied natural gas projects and mines.

The Canadian and United States governments are conducting a joint study to evaluate the infrastructure needs of the Great Lakes / St. Lawrence Seaway system, and the engineering, economic and environmental implications of those needs. The study will focus on the optimization of the existing infrastructure based on the system's current configuration and environmental footprint. Seven partners are involved including five Canadian and U.S. federal departments and the Canadian and U.S. Seaway corporations. The study is scheduled to continue until 2006.

Noise and Air Transportation

Air traffic around the world continues to increase rapidly, as does the number of extra hours aircraft spend in the air and waiting on the ground. This raises issues related not only to water and air quality but also to the noise associated with air travel. In the spring of 2004, Transport Canada joined the U.S. Federal Aviation

Administration (FAA) and the National Aeronautics and Space Administration (NASA) as a sponsor of the Center of Excellence (COE) for Aircraft Noise and Aviation Emissions Mitigation. This partnership provides Transport Canada with access to a wide range of resources and expertise from academic institutions as well as manufacturers.

In February 2004, Transport Canada officials participated in the activities of the Committee on Aviation Environmental Protection of the International Civil Aviation Organization (ICAO) to develop recommendations to reduce the environmental impact of aircraft noise and engine exhaust emissions (including more stringent standards for nitrogen oxides); to make progress on market-based measures to limit or to reduce emissions; and to provide guidance on implementing a "balanced approach" to noise management.

Contaminated Sites

The 2003 Federal Budget includes a commitment of $175 million over two years to establish a centrally managed fund to make ongoing resources available to federal contaminated sites. Transport Canada received $10 million for three remediation projects and $334,000 for seven site assessment projects in 2004/05 through the Federal Contaminated Sites Accelerated Action Plan.

Provincial/Territorial/Municipal Initiatives

Ontario

The Ontario Ministry of Transportation (MTO) has embarked on a process to develop a comprehensive, current and consistent approach to environmental compliance that will encompass all environmental factors for all highway activities from planning through to operation and maintenance. One of the first steps in developing a systematic approach to environmental management is the Environmental Standards Project (ESP). For more information, visit www.mto.gov.on.ca/english/engineering/envirostandards.

Saskatchewan

In 2004, Saskatchewan continued to explore and implement new initiatives and technologies that reduce vehicle fuel consumption and vehicle emissions and that optimize transportation facilities. For example, the Saskatoon Transit Service and Saskatchewan Highways are continuing to test canola–oil blend "biodiesel" in portions of their fleets. Indications are that biodiesel reduces diesel fuel consumption and NOx and VOC emissions, and significantly reduces vehicle engine wear. In addition, private industry has developed a canola oil-based diesel fuel additive to enhance regular diesel fuel. The City of Regina and Saskatchewan Energy vehicle fleets are now using compressed natural gas, which reduces petroleum consumption and vehicle emissions.

Alberta

Alberta Infrastructure and Transportation (INFTRA), in partnership with the Clean Air Strategic Alliance (CASA),[1] completed successful cold-weather testing of diesel particulate filter technology with City of Edmonton Transit buses. After a year of normal operations, the buses showed decreases in total hydrocarbon emissions between 61 and 87 per cent, carbon monoxide between 83 and 89 per cent, and total PM between 73 and 75 per cent. All the reductions occurred without a change in fuel consumption levels.

In 2004, the CASA Board also made recommendations to help manage transportation demand. CASA stakeholders and member companies, particularly those in Edmonton and Calgary, will be asked to evaluate and assess their current use of transportation demand management (TDM) measures, to consider implementing or modifying their programs as appropriate, and to report back to CASA in three years. Urban municipalities will be encouraged to promote such programs in their regions, and CASA will develop communication tools to help with the implementation and reporting on employer-based TDM measures.

1 CASA was established in March 1994 as a new way to manage air quality issues in Alberta. It is a non-profit association composed of stakeholders from government, industry and non-governmental organizations.

British Columbia

In December 2004, the Government of British Columbia released "Weather, Climate and the Future: B.C.'s Plan." It includes the development of TDM, congestion-reduction measures, incentives for hybrid/alternative-fuelled vehicles and a driver information program. The provincial government has set a target of 16 per cent GHG reductions from 2000 to 2005 through changes to its vehicle fleet by purchasing hybrid/alternative fuel vehicles, using biodiesel and ethanol fuel blends, switching to more efficient vehicles, and reducing kilometres travelled. The provincial government, and BC Transit (a provincial Crown corporation), is also testing biodiesel in eight fleets in the province. It is also making available funding of up to $250,000 to construct new cycling infrastructure through the provincial Cycling Infrastructure Partnerships Program.

Yukon

The Northern Climate Exchange Centre (NCE) has partnered with the City of Whitehorse, Yukon Government, Energy Solutions Centre, Yukon Science Institute, Yukon Youth Conservation Corps and Yukon Conservation Society to develop and launch an Anti-Idle campaign in the Yukon. Environment Canada's 2004 EcoAction Community Funding Program has provided additional funds for this program. This project will use a variety of social marketing techniques to reduce idling in Whitehorse. Anti-idling signs will be designed, produced and placed in parking lots, drop-off zones and delivery areas throughout the city to encourage drivers not to idle. The anti-idle campaign complements the existing public education and outreach activities of NCE. The newest mascot, "Auntie Idle," was developed by a local artist and will join "Bob and Dog Mackenzie" to deliver the *Climate Change: Are you doing your bit?* message in the Yukon.

Northwest Territories

The Northwest Territories Department of Transportation annually constructs and maintains the Mackenzie Valley Winter Road. This road has some 29 different stream crossings that until recently were made via natural or artificially thickened ice bridges. While best practices have been employed in their construction and location, warmer weather in recent years has made the construction and removal of these bridges more problematic. To properly mitigate the potential environmental impacts from these temporary ice bridges on fish habitat, the Department has been constructing new permanent bridges. Construction of these bridges at all stream crossings will ultimately remove any interference with natural stream flow and sediment issues caused by the temporary ice bridges.

RAIL TRANSPORTATION 6

Despite an overall steady level of rail activity, rail exports and imports increased in 2004. Productivity increases continued to be observed.

MAJOR EVENTS IN 2004

After a poor grain harvest season in 2002, grain loadings have been increasing steadily, up 20 per cent in 2004.

After a successful acquisition bid, Canadian National (CN) incorporated BC Rail into its operations in July 2004.

A ten-week strike of Iron Ore Company of Canada workers from July to September resulted in railway carloadings of iron ore down to less than half of the normal volume for these three months of the year.

INFRASTRUCTURE

The structure of Canada's rail system remained relatively stable in 2004. There was only a slight loss of track: Canadian Pacific Railway discontinued 129 kilometres of track in Saskatchewan and Alberta, while Southern Manitoba Railway discontinued about 100 kilometres of its system. There was also a large transfer of track, approximately 2,300 kilometres, when CN completed takeover of BC Rail in July. The only other transfer was in southern British Columbia, where Burlington Northern Santa Fe partially sold and leased nine kilometres of track to the newly formed Kettle Falls International Railway.

Table 6-1 shows the distribution of trackage by key carriers and carrier groups in 2004.

As previous annual reports have noted, the latter half of the 1990s saw an explosive growth in the number and activity of shortline railways in Canada. Shortlines began modestly in the late 1980s. Their numbers grew slowly during the early 1990s with only 11 new ones formed before 1996. After the *Canada Transportation Act 1996* came into force, the number of shortlines in Canada grew quite dramatically with 37 new ones formed between 1996 and 2000. In the past four years, however, the sector has plateaued and only a few new shortlines have been created. While more transfers will probably occur in coming years, it is unlikely they will do so at the same rate as in the 1990s.

Between 1990 and 2004, approximately 9,800 kilometres of rail line were discontinued. The majority of this was divided fairly equally between CN and Canadian Pacific Railway (CPR). In previous years, the majority of discontinuances were in eastern Canada, mainly Ontario and Quebec. In recent years, however, most of the track loss has been in the Prairie Provinces. Transfers typically occur from CN or CPR to other carriers. Recently, a substantial amount of track has been transferred among other carriers as well as from other carriers to CN, as with Algoma Central and BC Rail.

TABLE 6-1: RAILWAYS IN CANADA, 2004

	2004 Owned / Leased Route-kilometres	*2003 Owned / Leased Route-kilometres[1]*	*Per cent of Total (2004)*	*Percentage Change Over Previous Year*
CN Rail	21,293	18,969	43.7	12.3
CP Rail	13,347	13,477	27.4	(1.0)
Regional and Shortline Railways	13,209	15,628	27.1	(15.5)
All Others[2]	834	843	1.7	(1.1)
Total	**48,683**	**48,916**		**(0.5)**

Notes: By definition, route kilometres do not include parallel trackage, spurs, sidings and yard trackage. Totals may not add up due to rounding.

1. 2003 figures revised slightly to reflect improved data.
2. Terminal and switching railways, Canadian subsidiaries of U.S. railroads and passenger railways.

Source: *Transport Canada*

Table 6-2 shows rationalization activity in the rail sector in 2004 and from 1990 to 2004.

TABLE 6-2: RAILWAY RATIONALIZATION IN CANADA

		2004 Rationalization	*1990 – 2004 Rationalization*
Discontinuances	CPR	129	4,573
	CN		4,231
	Other		1,065
	Total		**9,869**
Transfers	CPR		3,865
	CN		7,983
	Other	2,882	4,151
	Total	**2,882**	**15,998**
Total	CPR	129	8,438
	CN		12,214
	Other	2,882	5,215
	Total	**3,011**	**25,867**

Note: Totals may not add up due to rounding.
Source: TransportCanada

The 25,867 kilometres of line rationalized since 1990 have resulted in major changes in the structure of the rail industry in Canada. CN and CPR remain the dominant carriers, accounting for about 90 per cent of industry activity and revenues. However, they operate about 70 per cent of the total domestic rail network, whereas a decade ago they operated about 90 per cent of the trackage. This may change somewhat as provincial governments continue to sell regional railways. While CN was not successful in acquiring Ontario Northland Railway, it was recently successful in acquiring BC Rail.

Both CN and CPR are expected to continue the rationalization of their networks. It is also likely that second-order rationalization (the rationalization of track acquired by shortline or other operators from CN or CPR) will continue.

Addendum tables A6-1 and A6-2 show further detail of railway rationalization in Canada by province.

INDUSTRY STRUCTURE

The character of the Canadian railway industry changed dramatically in the 1990s, as the number of carriers more than doubled. Despite these changes, CN and CPR continued to generate the bulk of revenues in the rail industry. Total rail industry revenues in 2003 were $8.3 billion, of which 89 per cent was generated by the Class I carriers, CN, CPR and VIA Rail. While this was down slightly from the 90.5 per cent share in 1990, Class I carrier revenues grew 1.2 per cent per year over the 1990 – 2003 period. By contrast, the regional railways (BC Rail, Algoma Central,[1] Ontario Northland, Cartier Railway and the Quebec North Shore & Labrador) saw their revenues decline by 0.3 per cent per year up to 2002. After Algoma Central was taken over by CN, this rate jumped to 0.9 per cent per year for the 1990 – 2003 period. As the shortline sector grew, so did its revenues, from about $95 million in 1990 to about $405 million in 2003. This growth equates to an annual growth rate of 11.7 per cent. It also translates into a relative increase in the shortline sector's proportion of rail industry revenues from 1.5 to 5.1 per cent.

Table 6-3 compares revenues in the railway sector in 2002 and 2003. Addendum Table A6-3 shows revenues since 1993.

TABLE 6-3: RAILWAY REVENUES, 2002 AND 2003

(Millions of dollars)

	2002	*2003*
CN	3,971	4,002
CPR	2,943	3,010
VIA Rail	407	415
Subtotal Class I	**7,321**	**7,427**
Regional[1]	502	467
Shortlines[1]	392	405
Total	**8,215**	**8,299**

1 Estimated for several carriers.
Source: Transport Canada, Statistics Canada

The intercity rail passenger sector continues to be dominated by VIA Rail, which accounts for about 88 per cent of total passenger revenues. The balance of intercity rail passenger services is provided by CN (former Algoma Central Railway services), Ontario Northland and the Quebec North Shore & Labrador. The Great Canadian Railtour Company provides seasonal services between Vancouver and Calgary and Jasper. Amtrak, the U.S. passenger rail corporation, offers service to Montreal, Vancouver and Toronto (the latter in conjunction with VIA Rail).

EMPLOYMENT

As Addendum Table A6-4 shows, employment in the rail sector has been declining significantly for many years. Over the past 13 years, railway employment fell by 4.6 per cent per year, from more than 67,000 in 1990 to about 36,000 in 2003. Employment at Class I carriers dropped 48 per cent over this period, or 4.9 per cent per year. Considering the loss of regional rail carrier employees due to CN's takeover of Algoma Central, this sector experienced annual average reductions in

1 2002 was the final year that Algoma Central was recognized as a separate entity for operating and financial reporting purposes. All reporting has now been integrated under CN Rail.

employment of 5.3 per cent over the same time period (from 5,600 employees in 1990 to just under 2,800 employees in 2003). By contrast, employment in the shortline sector increased 263 per cent over the same period, or 10.4 per cent per year, to reach approximately 2,000 people in 2003. The relative levels of employment in each class of carrier are consistent with these changes. From 1990 to 2003, the Class I carriers dropped from about 91 per cent of total rail industry employment to about 87 per cent, while the regional carriers dropped from 8.4 per cent to 7.6 per cent. Shortline employment, on the other hand, grew from a virtually non-existent proportion to about 5.6 per cent of total rail industry employment.

Table 6-4 compares the level of employment in the rail industry in 2002 and 2003.

TABLE 6-4: EMPLOYMENT IN THE RAIL INDUSTRY, 2002 AND 2003

	2002	*2003*
Class I	32,005	31,595
Regional[1]	3,258	2,773
Shortline[1]	2,015	2,029
Total	**37,279**	**36,397**

Note: Totals may not add up due to rounding.
1 Estimated for several carriers.

Source: Transport Canada, Statistics Canada

ENERGY

Class I railways, including VIA Rail, consumed about 1.9 billion litres of fuel in 1990 and 1.8 billion litres in 2003. However, output in terms of revenue tonne-kilometres (RTKms) increased by 31 per cent over the same period, from about 225 billion to about 294 billion RTKms. This demonstrates that while Class I carriers still accounted for 92 per cent of total sector fuel consumption in 2003, they have significantly increased their fuel efficiency. This is due largely to important investments by CN and CPR in new locomotive replacement programs in the latter half of the 1990s, to changes in operating practices, and to a reduction in operations over low-density lines, which for the most part were transferred to other operators. Addendum tables A6-5 and A6-6 provide information on rail energy consumption from 1993 to 2003. Information for years prior to 1993 can be found in previous Annual Reports.

Table 6-5 compares output in the railway sector in 2002 and 2003.

TABLE 6-5: RAILWAY OUTPUT IN MILLIONS OF REVENUE TONNE-KILOMETRES, 2002 AND 2003

	2002	*2003*
Class I	292,195.7	293,870.6
Regional[1]	18,406.6	16,670.7
Shortline[1]	7,267.5	7,338.4
Total	**317,869.8**	**317,879.7**

1 Estimated for several carriers.

Source: Transport Canada, Statistics Canada

Table 6-6 compares fuel consumption in the railway sector in 2002 and 2003.

TABLE 6-6: RAILWAY FUEL CONSUMPTION, 2002 AND 2003
(Millions of litres)

	2002	*2003*
Class I	1,808	1,847
Regional[1]	125	118
Shortline[1]	89	85
Total	**2,022**	**2,050**

1 Estimated for several carriers.

Source: Transport Canada, Statistics Canada

Regional railway fuel consumption and output have both remained relatively stable in recent years. Regional railway fuel efficiency has been higher than Class I railways until recently, but this has been due largely to the extraordinary fuel efficiency of Quebec North Shore & Labrador Railway: due to the nature of its operations, the QNS&L has experienced fuel efficiencies almost double the industry norm.

FREIGHT TRANSPORTATION

Generally, the output of railways operating in Canada increased from 1990 to 2002. Since 2002, it has remained steady at almost 320 billion tonne-kilometres. While CN experienced a four per cent decrease in revenue tonne-kilometres in 2003, down to 164 billion, CPR output increased almost 7.5 per cent to 130 billion. Combined output of Class II carriers dropped slightly, from 25.7 billion tonne-kilometres in 2002 to 24.0 billion tonne-kilometres in 2003.

From 1996 to 2000, movements of traffic forwarded to CN and CPR from Canadian Class II carriers increased. In 2001, however, these movements decreased slightly, to 18.5 million tonnes, due mainly to a drop in coal traffic from BC Rail. Since then, this traffic has continued to increase, reaching almost 20 million tonnes in 2003. After a two-year decrease in Class II carrier traffic received

from CN and CPR, this amount rose to 10.4 million tonnes in 2003. Traffic originating on a Canadian Class II carrier, forwarded to CN or CPR and then forwarded to another Canadian Class II carrier to be terminated more than doubled in 2003, totalling 0.67 million tonnes. Because it involves a bridge movement over CN or CPR, the latter traffic has both a forwarded and received component and would be double-counted if included in either forwarded or received traffic. Addendum Table A6-7 shows the trend of forwarded and received rail traffic since 1996, while Addendum Table A6-8 shows tonnage originating by railway sector since 1993.

Based on three quarters of data for 2004, CN and CPR output is expected to increase to 191 and 141 billion tonne-kilometres, respectively.

Rail Freight Traffic — Commodities

As Addendum Table A6-9 shows, annual rail loadings increased five per cent in 2004 to reach 273 million tonnes (not including receipts from U.S. connections). In Western Canada, volumes increased nine per cent to 150 million tonnes, while in Eastern Canada volumes remained near 123 million tonnes. In Western Canada, principal commodities loaded included coal, fertilizer materials, forest products and grain; while in Eastern Canada principal commodities loaded were iron ore, other ores and mine products, forest products and intermodal shipments.

Grain

After large decreases in 2002 and 2003, grain shipments in 2004 returned to levels comparable with those of the late 1990s, at 27.5 million tonnes. While this was a 20 per cent increase over 2003, shipments were still well below those volumes reported in the early 1990s, which were between 35 and 40 million tonnes.

Coal and Coke

After a large decline in 2003, to 31.8 million tonnes, shipments of coal and coke increased only slightly in 2004, by four per cent to 33.1 million tonnes. This is below the average of 38 million tonnes loaded since 1992.

Forest Products

Following a decline to just over 16 million tonnes in 1998, volumes of non-processed forest products remained steady until 2002, when shipments increased to 19 million tonnes. After dropping slightly to about 17.5 million tonnes in 2003, this commodity remained steady at 17.8 million tonnes in 2004. The volume of processed forest products, by contrast, has been increasing since 1998: it reached 27.5 million tonnes in 2004, a 10 per cent increase from 2003. The net result has been a relatively stable volume of forest products, hovering around 40 million tonnes, until 2002, when loadings reached 45 million tonnes. Totals have remained near this value for the past three years.

Ores and Mine Products

With the exception of 2003, shipments of iron ore have been on the rise since 1992. However, in 2004, due to an iron ore workers strike, shipments decreased to 27.9 million tonnes.

Fertilizer Materials

Although shipments of fertilizers have fluctuated since 1992, they have been increasing since 2001. In 2004, they reached 30.7 million tonnes, an 11 per cent increase over 2003.

Industrial Products

The largest commodity of this group is chemicals, which increased 11 per cent in 2004 to 16.0 million tonnes, the highest reported value in the last 13 years. Continuing with a steady increase, shipments of metals rose almost 11 per cent to 11.8 million tonnes. Although loadings of automobiles and parts fell slightly to 5.1 million tonnes, this value remains above the average for the time period of 4.1 million tonnes. After doubling in 1998, shipments of petroleum products have been increasing, and remained steady at 14.4 million tonnes in 2004.

INTERMODAL

Between 1996 and 2003, CN and CPR intermodal tonnage grew by 11.1 million tonnes, for an average annual growth rate of 7.0 per cent. Both domestic North American and marine–rail imports grew at an average of 9.0 per cent per year over the same five-year period (with the exception of 1998). Marine-rail exports have been increasing only slightly from 1996 to 2003, at an average rate of 2.6 per cent. These intermodal traffic trends are evident in Addendum Figure A6-1. Growth in total rail intermodal volumes was most significant between 1998 and 1999, at 12.6 per cent. From 2002 to 2003, growth was almost seven per cent, reaching 29.4 million tonnes; growth for 2004 is estimated at 32 million tonnes. Figure A6-2 in the Addendum shows the origin and destination of CN and CPR intermodal traffic. As seen in Addendum Figure A6-3, domestic North American intermodal volumes increased slightly to capture a 44.6 per cent share of the total traffic. This growth came at the expense of rail–marine intermodal exports, which fell slightly to a 25.6 per cent share. Rail–marine intermodal imports remained at 29.8 per cent of total intermodal traffic in 2003.

Canadian origin–destination volumes increased by 6.9 per cent in 2003, staying at 37 per cent of total market share.

As seen in Addendum Figure A6-4, containers on flat cars (COFC) continued to increase their market share in 2003, accounting for more than 92 per cent of total intermodal volumes. This is up considerably from 1996, when COFC only accounted for 77 per cent of total intermodal traffic. This increase was balanced by a proportionate decrease of trailer on flat car (TOFC) volumes.

RAIL FREIGHT TRAFFIC BETWEEN CANADA AND THE UNITED STATES

Addendum Table A6-10 shows volumes of rail export and import by commodity since 1996. Export rail tonnage in 2004 totalled 76.5 million tonnes, an 8.0 per cent increase. Once again, forest products were the largest contributor to export tonnage, increasing slightly to 28.1 million tonnes. Chemicals exports increased significantly in 2004, up 26.9 per cent to 12.5 million tonnes, while exports of fertilizer materials remained steady near 9.2 million tonnes. As in 2003, iron ore exports decreased, to 252,000 tonnes; however, these movements by rail are still above the norm. Grain experienced the largest increase, up 37.3 per cent to 4.5 million tonnes; this is just above the nine-year average of 4.2 million tonnes. Exports of other mine products experienced the largest decrease, down 47.5 per cent to a nine-year low of 2.3 million tonnes.

Addendum Table A6-11 shows values of rail export and import by commodity since 1996. Consistently, automotive has been the largest contributor to these totals, accounting for 49 per cent in 2004. This was followed by forest products at 22 per cent. Automotive exports in 2004 were the same as 2003, while forest products increased 23 per cent. Other value export commodities of chemicals and metals increased in 2004, resulting in an overall increase of export value to $78.3 billion.

Ontario remained the largest contributor to rail export volume and value in 2004, originating almost 25 per cent of export volume (18.9 million tonnes) and 62 per cent of export value ($49.3 billion).

Alberta's contribution to rail exports has been increasing since 1996, making it the second largest province of export by volume in 2004, when it accounted for 18 per cent and originated 14.0 million tonnes. In terms of value, Quebec remains the second largest contributor to rail exports, accounting for 12 per cent and originating $9.7 million in 2004. See Addendum tables A6-12 and A6-13 for export volumes and values by province of origin.

Import rail tonnage experienced a slight increase in 2004 (5.4 per cent) to 21.7 million tonnes. The largest commodity group was chemicals, which accounted for almost 27 per cent of rail imports while increasing only slightly in 2004 to 5.8 million tonnes. By contrast, metals increased 59 per cent to 2.9 million tonnes in 2004, accounting for 13.5 per cent of total rail imports.

Automotive imports remained just above one million tonnes in 2004, but there was a 2.9 per cent drop by import value, to $12.2 billion. Nonetheless, automotive remained the top commodity, accounting for 48 per cent of import value.

As seen in Addendum Table A6-14, Ontario cleared 53 per cent of imports, 11.4 million tonnes in total. Combined, Alberta and Quebec cleared 5.3 million tonnes of imports in 2004, a slight decrease for both provinces. In terms of value, Ontario was also the dominant province of clearance, with $17.9 billion, a slight increase from 2003. This is evident in Addendum Table A6-15.

Further details on exports and imports can be seen in Addendum tables A6-16 to A6-19, which show major commodities originating from and cleared in the provinces mentioned above.

Border Crossing Points

As seen in Addendum Table A6-20, two Ontario cities, Fort Frances and Sarnia, were the main border crossing points for rail exports by volume in 2004: they accounted for 19.5 per cent (14.9 million tonnes) and 16.8 per cent (12.8 million tonnes) of exports, respectively. The major commodities exported at these border points were forest products and chemicals, which accounted for about 60 per cent of rail export volumes through these locations.

As seen in Addendum Table A6-21, Sarnia and Windsor were the main border crossing points for rail exports by value in 2004: they accounted for 33.0 per cent ($25.8 billion) and 22.0 per cent ($17.2 billion) of exports, respectively. The top commodity exported at these locations was automotive products, which accounted for just over 70 per cent of rail export value at these locations.

Sarnia was also the leading border crossing point for import tonnage in 2004, accounting for 18.5 per cent of total rail import volume (4.0 million tonnes). This is seen in Addendum Table A6-22. Chemicals were the dominant commodity group imported through Sarnia, accounting for 40 per cent of rail imports here. Other major locations as ports of clearance included Toronto, Sault Ste. Marie, Edmonton and Montreal.

The value of imports cleared in Toronto declined slightly in 2004, to $4.1 billion, while those cleared in Windsor increased to $3.9 billion. Valuable commodities cleared in Toronto include automotive and chemicals. Addendum Table A6-23 shows rail imports by value and port of clearance.

Overseas Trade

In 2003, Class I railways carried 83 million tonnes of goods to and from Canadian ports. This was up from 82 million tonnes in 2002. For the second year in a row, traffic in transit between Canada and the United States increased, by almost 23 per cent to 5.5 million tonnes. Addendum Table A6-24 shows fluctuations of rail–marine exports and imports since 1996.

Also for the second year in a row, rail–marine exports originating in British Columbia and Alberta decreased slightly. Those originating in Saskatchewan, however, increased slightly, mainly due to higher exports in grains and potash. These three provinces accounted for 79 per cent of total rail–marine exports in 2003. Addendum Table A6-25 shows rail–marine exports since 1996 for all provinces of origin and the United States.

As in 2002, coal traffic fell by 11 per cent in 2003, to 25 million tonnes. Rail–marine exports of grain decreased slightly to 14 million tonnes. Other agricultural and food products experienced the largest increase in 2003, up 75 per cent to 9 million tonnes. Rail–marine exports of fertilizer materials increased to 10.7 million tonnes, the largest volume reported within the eight-year series of data. Addendum Table A6-26 shows rail–marine exports by commodity since 1996.

Rail–marine imports by Class I carriers totalled 9.2 million tonnes, a small increase. Just over 90 per cent (8.4 million tonnes) of these imports were intermodal.

As in 2002, Ontario and Quebec in 2003 were the main destinations of rail–marine imports, totalling 5.5 million tonnes, or 59 per cent of the total; this was very comparable to 2002. While rail-marine imports to Ontario remained steady, those to Quebec increased by 13 per cent. Rail-marine imports to the United States increased slightly to 2.9 million tonnes. Although not as significant as in the past, the volume of goods destined for Alberta continued to drop, to 0.44 million tonnes in 2003. Addendum Table A6-27 shows rail–marine imports since 1996 for all provinces of destination and the United States.

Although substantially less than intermodal traffic, chemicals was the second largest commodity for rail–marine imports in 2003, at 0.2 million tonnes. Imports of ores and mine products continued to decline, however, dropping 44 per cent to 0.2 million tonnes. Table A6-28 shows rail–marine imports by commodity since 1996.

PASSENGER TRAFFIC

Both total intercity rail passengers carried and passenger-kilometres decreased slightly in 2003, to 3.9 million and 1.4 billion, respectively. VIA Rail carried 4.8 per cent fewer passengers (3.8 million in total) and travelled 9.6 per cent fewer passenger-kilometres (1.4 billion in total). Class II carriers carried 37 per cent fewer passengers in 2003, mainly due to BC Rail's discontinuance of passenger services in late 2002. Addendum Table A6-29 gives details of intercity rail passenger traffic for Class I and II carriers, including Algoma Central, Ontario Northland and the Quebec North Shore & Labrador Railway.

Total commuter rail traffic in Toronto, Montreal and Vancouver in 2003 was 52.5 million passengers, a five per cent increase from 2002. This change reflects a three per cent increase in Toronto's GO Transit and an 11 per cent increase in Montreal's Agence Métropolitaine de Montréal (AMT) riderships. GO Transit represented 69 per cent of commuter rail traffic. Addendum Table A6-30 shows total commuter rail ridership since 1994 for these three cities.

PRICE, PRODUCTIVITY AND FINANCIAL PERFORMANCE

Rail Freight Industry

In 2003, the revenues of CN and CPR operations in Canada grew by 1.4 per cent. This was down slightly from the average yearly increase of 1.8 per cent from 1998 to 2003. Rail freight rates fell by an average 1.7 per cent in 2003 (as rates declined in nearly all commodities) compared with an estimated average 1.4 per cent annual decrease over the 1998 – 2003 period. Demand for rail freight services was strong, posting an overall increase of 3.2 per cent, with agricultural shipments and intermodal experiencing increases of 5.6 and 7.4 per cent, respectively. By commodity groupings, household products, intermodal, and machinery and equipment had the largest year-over-year revenue fluctuations, with variations of 10.5, 4.5 and -7.5 per cent, respectively. Intermodal services accounted for an estimated 27 per cent of total freight revenues, compared with 20 per cent in 1998.

In 2003, productivity increased by 2.4 per cent, the eighth consecutive yearly increase. Gains in productivity in the industry have averaged 5.4 per cent a year since 1998. In terms of unit costs, the surge in oil prices has translated into an increase of 3.3 per cent in unit fuel costs. Both labour and capital unit costs declined, however, resulting in an overall 0.5 per cent drop in unit costs in 2003.

The combined operating profit of $1.45 billion for CN and CPR in 2003 was 2.2 per cent lower than in 2002; however, the operating ratio remained below 80 per cent. The shortline railways' financial performance improved somewhat in 2003, with a calculated return on assets of 10 per cent (see Table 6-7). Addendum tables A2-61 to A2-64 provide more details on the railway industry.

TABLE 6-7: FINANCIAL INDICATORS OF SHORTLINE RAILROADS,[1] 2001 – 2003

	2001	*2002*	*2003*
Net Fixed Assets in $M	453.3	488.7	495.4
Operating Revenues in $M	339.0	337.6	332.6
Operating Expenses in $M	296.8	310.4	283.1
Net Income in $M	42.2	27.2	49.5
Return On Assets in %	9.3	5.6	10.0
CTA[2] Approved Cost of Capital in %	11.4	11.0	10.0

1 Excludes regional railroads and Canadian connectors to U.S. railroads.
2 Canadian Transportation Agency

Source: Transport Canada and Statistics Canada

VIA Rail

In 2003, VIA Rail's own revenues decreased by an estimated 8.1 per cent, reversing a seven-year trend of increasing revenues. While changes in prices were marginal, the demand dropped on all business segments (corridor, long haul and remote-regional) for an overall decrease of 8.5 per cent. Passenger traffic decreased by 4.8 per cent, possibly reflecting the impact of the SARS outbreak.

VIA Rail's productivity fell in 2003 by an estimated 8.7 per cent, with declines in all production factors: labour, fuel and capital. For their part, unit costs increased by an estimated 12.2 per cent, bringing costs close to their 1995 level.

Total costs increased by 2.7 per cent in 2003. VIA Rail recovered an estimated 45 per cent of total costs in 2003, the first time since 1992 that this ratio has declined.

ROAD TRANSPORTATION 7

In 2003, the revenues of for-hire trucking carriers and bus service operators increased. The number of trucking bankruptcies dropped by 19 per cent in 2004.

MAJOR EVENTS IN 2004

Legislative and Regulatory Changes

Motor Carrier Safety Fitness Certificate Regulations — These proposed amendments to the *Motor Vehicle Transport Act* were published for public comment in the *Canada Gazette* Part I on May 3, 2003. These proposed regulations would give provinces and territories the responsibility to monitor the safety performance of all extra-provincial motor carriers licenced in their jurisdiction. Provinces would maintain a complete safety compliance profile of each motor carrier, using input from all jurisdictions in which those carriers operate. They would give all carriers an initial safety fitness certificate of "Satisfactory – Unaudited" until a safety performance is known and/or a facility audit is completed. If a carrier is rated "Unsatisfactory," it could be prohibited from operating on Canadian roads. It is anticipated that these new regulations will be implemented in 2005.

Hours of Service Regulations — On February 15, 2003, revisions to the Federal Hours of Service Regulations for Commercial Vehicle Drivers (bus and truck), applicable to extra-provincial carriers, were published in the *Canada Gazette* Part I. Transport Canada received 50 submissions commenting on the proposed changes. On December 20, 2004, Transport Canada announced that a consensus had been reached among key players in the Canadian trucking industry to limit commercial vehicle drivers to 13 hours of driving and 14 hours on duty per 24-hour period. The proposed regulatory changes are the product of long consultations with industry, the provinces and territories, and others, including Teamsters Canada. The new rules will increase minimum off-duty time over a 24-hour period by 25 per cent, from 8 hours to 10 hours. This will provide significantly more opportunity for drivers to rest. The new rules will also reduce on-duty time by 12 per cent, from 16 hours to 14 hours, and will reduce the maximum daily driving time for truckers in a 24-hour period by 19 per cent, from 16 hours to 13 hours.

The expectation now is that a final federal regulation will be published in the *Canada Gazette* Part II in 2005 and mirrored shortly thereafter in provincial and territorial regulations.

Vehicle Weights and Dimensions — The federal, provincial and territorial governments agreed to make three changes to the national standards for the weights and dimensions of trucks and buses. The country's transportation ministers endorsed these changes following a recommendation by the intergovernmental Task Force on Vehicle Weights and Dimensions Policy, which considered them at the request of industry stakeholders. Under the changes:

- the existing standard for the overall box length on a truck configured as an "A-train double-trailer" is increased to 20 metres, giving that configuration the same length as the "B-train" and "C-train" double-trailer configurations;
- for the second trailer in a "B-train double-trailer" truck configuration, a new standard will limit the placement of the kingpin to a maximum two metres from any point on the front of the trailer or its load, restricting the swing-out of the trailer during maneuvers; and
- recreational vehicles (i.e. motor homes) are shifted from the category covering "straight trucks" to the category covering "intercity buses," which increases their maximum allowable length from 12.5 to 14 metres.

The new standards are targeted for implementation by individual provinces and territories on July 1, 2005. Canada's national standards are defined in the Memorandum of Understanding (MOU) on Interprovincial Vehicle Weights and Dimensions.

Bus Industry — There were few changes to the regulatory regime for the intercity and charter bus industry in 2004. The only significant development was in British Columbia, where a new *Passenger Transportation Act* came into force in June. This retained economic regulation for intercity bus operations (as well as limousines and taxi services); otherwise, it opened industry entry to all carriers meeting safety and insurance requirements.

Other Issues of Significance

The trucking industry faced a number of challenges over the course of 2004.

U.S. border security measures — U.S. border security measures continue to have a major impact on Canadian carriers transporting goods into the United States. These measures include, among others new requirements for the transportation of explosives, prior notification requirements for food shipments, and prior notification requirements and advanced electronic filing of cargo information. Other measures on the horizon include driver credentials and the possible use of biometric identification.

Cargo Securement — New cargo securement rules drafted by the Canadian Council of Motor Transport Administrators went into effect January 1, 2005. These nation-wide regulations apply to all vehicles with a gross vehicle weight rating or gross combination weight rating of more than 4,500 kilograms. They mirror the North American Cargo Securement Standard that has been in effect in the United States since January 2004.

Truckers must now follow a new set of tie-down standards. Cargo must be immobilized or secured so that it can't: leak, spill, blow or fall from the vehicle; fall through the vehicle; or otherwise become dislodged or shift upon or within the vehicle so that the vehicle's stability or maneuverability is affected. The provinces will have an initial educational period in effect until July 2005, after which violations will be enforced through fines. Violations that pose a clear and present safety risk, however, are enforceable immediately.

Shipper/Carrier Relations — With little excess capacity existing within the industry, trucking firms have been able to levy charges for excessive driver wait times, fuel and insurance cost increases, and even border security costs. This situation is tied to the strength of the economy and the ability of the trucking industry to meet demand for trucks and drivers.

Currency Appreciation — The significant increase in the value of the Canadian dollar relative to the U.S. dollar forced many carriers to levy currency surcharges on their clients.

U.S. Hours of Service — The Federal Motor Carrier Safety Administration has until September 30, 2005, to develop a new set of regulations governing hours of service. The agency has published its intent to investigate the possibility of a rule regarding the use of on-board recorders to enforce hours of service compliance. The industry in Canada is supportive of this initiative in the U.S. and is urging Transport Canada and the provinces to work out the ground rules for a harmonized North American approach.

INFRASTRUCTURE

Road Network

Canada's road network consists of more than 1.4 million two-lane equivalent kilometres: 110,000 kilometres of freeways and primary highways; 115,000 kilometres of secondary highways and other arterial roads; and more than 1.2 million kilomotres of local streets and rural connector roads. For a breakdown of Canada's road network by province, see Addendum Table A7-1.

INDUSTRY STRUCTURE

Trucking Industry

Trucking plays a significant role in Canada's economy. The goods shipped by truck range from raw materials, to components, to final products. For-hire carriers, private carriers, owner-operators and courier firms make up the industry. As a whole, the industry generated an estimated $54.7 billion in revenues in 2003. Trucking firms can be differentiated in a number of ways: the size of their fleet of trucks; the type of equipment they use; the geographic scope of their operations; the type of services they offer; and the type of freight they carry. They can also be differentiated by jurisdiction of operations. Carriers that provide interprovincial or international (extraprovincial)

INTELLIGENT TRANSPORTATION SYSTEMS

Intelligent Transportation Systems (ITS) represent a new domain using advanced, or "smart," technologies to exchange information in real time, allowing users, vehicles and infrastructure to be brought together. This make more efficient use of available resources by managing transportation demand.[1]

The key benefits of ITS technologies can be found in a number of areas, including greater safety of the transportation system; greater mobility; enhanced economic productivity; reduced travel time; lower costs for governments, travellers and operators; greater energy efficiency; and reduced impacts on the environment.[2]

Two recent examples illustrate the benefits of ITS technologies:

- ***Road Weather Information Systems*** — These are automated weather stations that use a combination of pavement sensors, telecommunications and other systems to provide real-time information on road and weather conditions. This information is then used to inform road maintenance crews when and how much de-icing chemicals to apply to the road surface. This helps make winter driving safer, reduce the costs of winter road maintenance and mitigate the effects of these chemicals on the environment.
- ***Traffic Management Systems*** — A good example of such systems is the COMPASS Freeway Management System, used in two major urban centres in Ontario. Traffic is monitored through the integrated use of pavement sensors, remote-controlled cameras, variable message signs and information processing centres, and road users are informed of road conditions. Emergency response services can also be informed of traffic incidents sooner. Traffic management systems also provide data on traffic volumes, which can in turn be used for traffic planning purposes (i.e. design considerations and management of traffic flows). Studies have demonstrated that the COMPASS system has reduced overall delay by 5.3 million vehicle-hours per year, fuel usage by 11.3 million litres per year, and green house emissions by 3,100 tonnes per year.[3]

Through the establishment of the ITS Strategic Plan for Canada, "En Route to Intelligent Mobility," the federal government has been working to promote awareness of such technologies and to accelerate their deployment across Canada. The Plan also recognizes the importance of further research and development in this field, and has established a strategic approach to promote the sharing and commercialization of knowledge obtained through ITS R&D projects. Addendum Table A7-2 gives an overview of projects that received federal funding through the ITS component of the Strategic Highway Infrastructure Program.

trucking services fall entirely within federal jurisdiction, while carriers that operate solely within a province fall within that province's jurisdiction.

Figure 7-1 shows the structure of the Canadian Trucking Industry and revenues for 2003.

FIGURE 7-1: TRUCKING INDUSTRY STRUCTURE AND REVENUES, 2003

Source: Statistics Canada, Special tabulations based on QMCF-Q4 Survey and Cat. 50-002; "Profile of Private Trucking in Canada", L.P. Tardiff Associates, Jan. 1998; "Canadian Courier Market Size, Structure and Fleet Analysis Study", Infobase Marketing Inc., Jan. 2001

For-hire motor carriers are defined as those that haul freight for others for compensation. They offer either truckload (TL) or less-than-truckload (LTL) services, or a mix of the two. These carriers are further categorized according to the types of freight they carry, such as general freight, household goods, liquid and dry bulk, forest products, and specialized freight. There were approximately 9,600 for-hire motor carriers in Canada in 2003, compared with 9,682 in 2002.

The top ten for-hire trucking companies,[4] based on total number of vehicles (tractors/trailers) in Canada, remained unchanged in 2004 over the previous year. They include TransForce Income Fund, Montreal, Quebec (8,100); Trimac Transportation Services, Calgary, Alberta (7,202 vehicles); Vitran Corporation, Toronto, Ontario (6,126); TransX, Winnipeg, Manitoba (4,377); SLH Transport, Kingston, Ontario (4,310); Challenger Motor Freight, Cambridge, Ontario (4,248); Robert Transport / Groupe Robert, Boucherville, Quebec (4,109); Mullen Transportation Inc., Aldersyde, Alberta (4,072); Paul's Hauling Group, Winnipeg, Manitoba (3,795); and Day & Ross Transportation Group, Hartland, New Brunswick (3,357).

1 Innovation Through Partnership, Intelligent Transportation Systems Research and Development Plan for Canada, R&D Contribution Agreements Applicant's Guide, June 2003

2 An Intelligent Transportation Systems Plan for Canada: En Route to Intelligent Mobility, November 1999.

3 An Intelligent Transportation Systems Plan for Canada: En Route to Intelligent Mobility, November 1999.

4 Source: *Today's Trucking*, March 2004.

In 2004, there were fewer changes in the industry (acquisitions, strategic alliances and mergers of motor carriers) than in previous years. However, Canada's largest for-hire trucking operation, TransForce Income Fund of Montreal, was very active, acquiring a number of other firms. In January, it acquired Transport Georges Lacaille Ltée, a corporation specializing in truckload activities in Quebec, Ontario and the United States. Headquartered in Carignan, Quebec, Lacaille had revenues of more than $10 million in its last fiscal year. In February, TransForce acquired Transport S.A.S. of Drummondville, Quebec, and Location S.A.S. Inc. The S.A.S. group had established a solid presence in the truckload transborder sector and had revenues of more than $11 million in its most recent fiscal year. TransForce then acquired Transpel (1994) in April and Highland Transport in August. Transpel, headquartered in Boucherville, Quebec, operates in specialized truckload activities and had revenues of more than $33 million in its last fiscal year. Highland Transport, based in Toronto and one of Canada's largest truckload carriers, also operated facilities in Montreal, Vancouver and Moncton. Its presence in the truckload sector extends through nine provinces and into key areas of the United States. Highland Transport's revenues for its last fiscal year exceeded $125 million. Finally, in September, TransForce acquired Ganeca Transport, which operated in the transborder truckload sector out of Saint Hyacinthe.

Owner-operators own and drive their own truck and operate as small independent for-hire truckers hauling trailers for other carriers or directly for a shipper. By using owner-operators, trucking companies can expand or contract their capacity in response to changing market conditions. There were approximately 35,100 owner-operators in Canada in 2003, compared with 35,085 in 2002.

Couriers and parcel-delivery firms are considered to be part of trucking activity because they operate trucks and provide some of the same services as for-hire carriers. However, there are relatively few trucks used in the courier industry — approximately 2,000 — and most companies use small cube vans, automobiles and even bicycles for deliveries. Operations include same-day messenger delivery and overnight or later delivery. In 2003, the courier industry generated an estimated $5.7 billion in total revenues, based on average volumes of 2.3 million packages per day. There are approximately 17,000 small courier companies that generate revenues less than $1 million annually. These companies account for 97 per cent of the total number of courier companies yet account for only 14 per cent of total courier revenues.

Private trucking is that part of the industry not covered by the for-hire segment. This segment includes companies that primarily haul their own freight but that occasionally haul goods for others for compensation. The value of these services is captured under some other, non-trucking part of the national accounts (e.g. farming or manufacturing) because these trucks are operated by someone working for an industry other than for-hire trucking. Most companies that haul their own products in trucks they own do not ordinarily record revenues for this operation. At $24.7 billion, the estimate for private trucking is better viewed as the operating costs of trucks for these companies. Caution should be exercised in using this estimated value. To estimate the value of private trucking in 2003, the percentage increases or decreases in the for-hire sector since 1998 were applied to the value of private trucking as calculated in the January 1998 study *Profile of Private Trucking in Canada*.

Other includes that part of the industry using trucks for purposes other than hauling freight commercially. For example, a construction company uses trucks and trailers to transport heavy machinery between job sites. Municipal governments, which use trucks as platforms for specialized equipment, such as a garbage packer, tree-trimmer, crane or snow plough, run some of the largest fleets on the road.

The annual number of trucking bankruptcies has steadily decreased since 2001, the last year the number increased. The number of bankruptcies decreased 14 per cent in 2002, nine per cent in 2003 and 19 per cent in 2004. These decreases are more pronounced than those observed for other sectors of the economy.

Addendum Table A7-3 shows the number of trucking bankruptcies compared with the economy by region from 2000 to 2004.

In terms of revenues, general freight carriers continue to dominate the for-hire sector, accounting for 63 per cent of for-hire revenues in 2003. Specialized freight accounted for 17 per cent of total revenues. Table 7.1 compares the revenues of large for-hire trucking firms by the type of freight carried from 2001 to 2003.

Table 7.2 shows total for-hire trucking revenues by size of carrier from 2000 to 2003, as measured by four categories of annual revenues: $25 million or more; $12 million to $25 million; $1 million to $12 million; and less than $1 million. Total revenues have more than doubled since 1991; the proportion of revenues in each of the four categories, however, has remained relatively stable. Addendum Table A7-4 shows the same information over a longer time series.

TABLE 7-1: FOR-HIRE CARRIER REVENUES BY MARKET SEGMENT, 2001 – 2003[1]

	(Millions of dollars)			Per cent of Total		
	2001	*2002*	*2003*	*2001*	*2002*	*2003*
General freight	12,761.8	12,803.7	13,247.9	60.8	62.1	62.5
Movers	629.1	599.8	505.2	3.0	2.9	2.4
Liquid bulk	1,654.5	1,776.5	1,505.9	7.9	8.6	7.1
Dry bulk	1,470.8	1,159.8	1,593.6	7.0	5.6	7.5
Forest products	1,030.2	948.6	828.7	4.9	4.6	3.9
Other specialized freight	3,456.3	3,329.4	3,523.0	16.5	16.1	16.6
Total	**21,002.8**	**20,617.8**	**21,204.3**	**100.0**	**100.0**	**100.0**

Note: "Other specialized freight" includes motor vehicles, heavy machinery, agricultural, live animals and other commodities carriers.

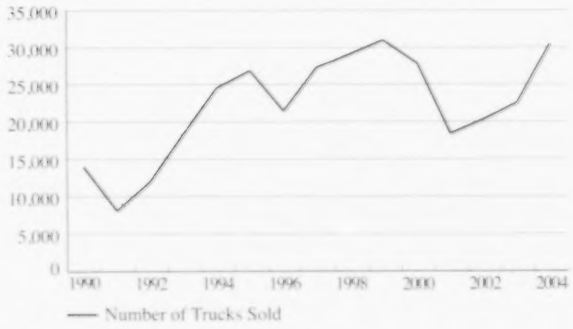
1 Includes medium and large for-hire carriers, i.e., carriers with annual operating revenues of $1 million or more.

Source: Transport Canada, based on Statistics Canada, Quarterly Motor Carriers of Freight Survey (QMCF) 2000 – 2003

Reported sales of Class 8[5] trucks have fluctuated yearly. This has have been driven by a number of factors, including the profitability of carriers, the demand for trucking services and carriers' fleet replacement policies. The demand for many trucking services tends to increase or decrease with market conditions (the economy as a whole or certain segments of the economy), and swings in these market conditions tend to be exacerbated in the final demand for trucking services. Following the 2001 economic slowdown in both Canada and the United States, truck sales have increased each year, by 10.5 per cent in 2002, 10.8 per cent in 2003 and 34.8 per cent in 2004.

Figure 7-2 shows the sales of Class 8 trucks from 1990 to 2004.

FIGURE 7-2: SALES OF CLASS 8 TRUCKS IN CANADA, 1990 – 2004



Source: Canadian Vehicle Manufacturers' Association

BUS INDUSTRY

Transit, school, intercity and charter/tour are the four principal sectors[6] of the Canadian bus industry. The main characteristic distinguishing intercity and charter operators from the other bus sectors is their use of motor coaches (as opposed to school or transit buses). The school, intercity and charter/tour are closely interrelated, and corporate ownership cuts across sectoral lines. Carriers in all sectors and of all sizes often offer a mix of services.

Scheduled Intercity Bus Carriers — These carriers primarily operate scheduled services between two or more urban areas. These carriers link all Canadian provinces and territories except for Nunavut. Greyhound, a subsidiary of Laidlaw International Inc., is the largest Canadian scheduled carrier and the principal intercity operator in Ontario and the west. The largest intercity carrier east of Ontario is Groupe Orléans, which operates in Quebec as Orléans Express and in the Maritimes as

TABLE 7-2: DISTRIBUTION OF TOTAL FOR-HIRE TRUCKING REVENUES BY SIZE OF CARRIERS, 2000 – 2003[1]

	Small Carriers (Less than $1 million)		*Medium Carriers ($1 – 12 million)*		*Large Carriers ($12 – 25 million)*		*Top Carriers (Over $25 million)*		*Grand Total*
Year	*Revenues (Millions of dollars)*	*Share (per cent of total)*	*Revenues (Millions of dollars)*	*Share (per cent of total)*	*Revenues (Millions of dollars)*	*Share (per cent of total)*	*Revenues (Millions of dollars)*	*Share (per cent of total)*	*Revenues (Millions of dollars)*
2000	1,366	6.2	9,514	43.0	4,660	21.1	6,562	29.7	22,103
2001	1,512	6.3	11,277	47.1	4,506	18.8	6,662	27.8	23,758
2002	1,500	6.4	10,167	43.0	5,091	21.6	6,859	29.0	23,618
2003	1,550	6.4	10,057	41.3	5,561	22.8	7,186	29.5	24,354

Note: 2002 and 2003 small for-hire carriers revenues estimated.

1 Including motor for-hire carriers of freight earning annual revenues of $30,000 or more.

Sources: Transport Canada, based on Statistics Canada, Annual Motor Carriers of Freight Survey (AMCF) 1990-93; Annual Supplement (Q5) 1994-1998 and Quarterly Motor Carriers of Freight Survey (QMCF) 1999-2003

5 Trucks with a gross vehicle weight exceeding 15,000 kilograms.

6 The North American Industrial Classification System (NAICS) has been used in Canada since 1997. The NAICS breaks down the bus industry under six headings: urban transit systems; interurban and rural bus transportation (scheduled intercity); school and employee bus transportation; charter bus industry; other ground passenger transportation (shuttle); and scenic/sightseeing transportation.

Acadian Lines. Coach Canada provides scheduled service in the Montreal–Toronto–Niagara corridor. Other scheduled operators include the Saskatchewan Transportation Company and Ontario Northland (both provincial Crown corporations), DRL (Newfoundland and Nova Scotia), and Les Autobus Maheux and Intercar (both Quebec). Most scheduled intercity operators also provide at least some charter service.

Charter/Tour Carriers — Charter service typically refers to the rental of a bus to a person or group where all passengers embark and disembark at the same point. By contrast, tour carriers primarily sell individual seats for scenic and sightseeing services over fixed routes. Shuttle carriers are the main providers of services to airports and rail terminals. The larger charter/tour carriers include Brewster Transportation & Tours, Pacific Western Transportation Ltd. and Coach Canada. A single carrier frequently offers both charter and shuttle services, and it is not uncommon for such carriers to also provide school bus service.

School Service — School bus carriers provide bus service to transport students to and from school. In addition, most school bus operators provide some charter service. Laidlaw is the largest school bus carrier in Canada.

Urban Transit Service — All major cities in Canada have some form of public transit service. Close to 20 million people are provided with regular transit service covering 2,600 fixed routes using a mix of buses, trolley coaches, light rail vehicles and commuter rail vehicles. Municipal, federal and provincial governments provide operating and capital contributions for urban transit services. Some urban transit operators offer school bus and charter services as well as services to travellers with disabilities.

Bus Transportation

Altogether, the approximately 1,500 operators that make up the Canadian bus industry move more than 1.5 billion passengers each year. In 2003, the bus industry generated close to $7.5 billion in total revenues, including government operating and capital contributions. The industry can by analyzed by segment (i.e. main company activity as classified under NAICS) or by service lines.

Bus segments (NAICS) — Urban Transit continued to be the largest sector by far in the bus industry in 2003. The segment captured almost 67 per cent of total industry revenues, including government contributions (or 49 per cent excluding government contributions). Operating and capital contributions from governments accounted for 54 per cent of urban transit operators' total revenues. Urban transit operators are typically dedicated to transit operations, with only a fraction of their revenues coming from other service lines.

The second largest segment was the "School Bus" sector, with 31 per cent of total bus revenues. Intercity operators and charter/tour operators ranked third. Almost all of those operators, regardless of their primary business, provided other service lines, which demonstrates the heterogeneous character of the industry.

Service Lines — Because most bus companies provide a mix of services, looking at service lines across the industry arguably gives a better indication of industry developments than an analysis of growth in each NAICS category.

Overall, the bus industry grew from $5.3 billion in 1996 to $7.5 billion in 2003, an average annual growth of almost five per cent. However, this growth was unevenly distributed among the service lines, averaging between 2.5 per cent for "parcel express delivery" and 7.4 per cent for "charters, shuttle and sightseeing" services, the best performance of any of the service lines during this period.

Service line revenues were somewhat higher since 2001 due to a new bus survey capturing a larger number of companies.[7] In terms of passengers carried, urban transit services (including urban transit operators and other operators offering transit services) carried 1,656 million passengers in 2003, a two per cent increase over 2002. Intercity services carried 14.0 million passengers in 2003, representing a 7.3 per cent decrease over the 2002 total. Table 7-3 shows bus revenues by service lines from 1996 to 2003.

7 From 1994 to 2000, the passenger bus and urban transit survey covered companies having annual gross revenues of $200,000 or more. Since 2001, the new passenger bus survey has covered *all* companies that have at least one bus establishment that provides bus and urban transit services.

TABLE 7-3: BUS INDUSTRY REVENUES BY BUSINESS LINES, 1996 – 2003

(Millions of dollars)

	1996	1997	1998	1999	2000	2001[1]	2002	2003[2]
Number of companies	898	877	1,110	1,062	968	1,813	1,715	1,497
Service Line								
Urban transit services	1,574	1,672	1,694	1,817	1,956	2,092	2,234	2,317
School bus transportation	832	826	894	915	964	1,112	1,220	1,233
Charters, shuttle and sightseeing services	334	316	369	352	449	469	506	552
Scheduled intercity services	248	241	240	236	271	332	329	319
Other passenger/ operating revenues	196	191	216	219	225	246	283	197
Parcel express delivery	85	79	87	88	96	98	100	101
Total (excluding government contributions)	**3,269**	**3,326**	**3,499**	**3,627**	**3,961**	**4,349**	**4,672**	**4,719**
Government contributions[3]	2,056	2,137	2,386	2,562	2,271	2,355	2,440	2,774
Total	**5,326**	**5,463**	**5,885**	**6,189**	**6,231**	**6,703**	**7,112**	**7,493**

1. From 1996 to 2000: Including bus operators with annual revenues greater than $200,000; 2001-2003: New "Passenger bus and urban transit" survey by Statistics Canada including all bus companies.
2. Preliminary data for 2003.
3. Including operating and capital government contributions for urban transit.

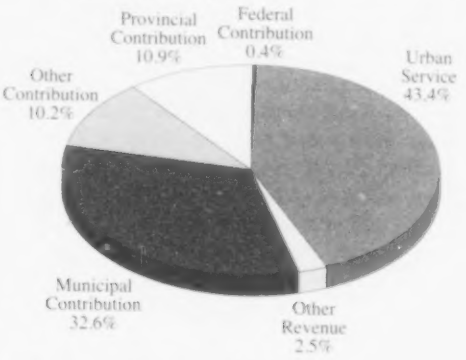
Source: Transport Canada, adapted from Statistics Canada, Passenger bus and urban transit statistics, Cat. 53-215, and Statistics Canada, New "Passenger bus and urban transit" survey for 2001, 2002 and 2003; special tabulation based on NAICS and Canadian Urban Transit Association (CUTA).

URBAN TRANSIT

In 2003, revenues of urban transit operators totalled $5.0 billion, up eight per cent compared with 2002. The main source of revenues for operators was government contributions, which accounted for 54 per cent of the total. Transit services accounted for 43 per cent of this total. From 1996 to 2003, operating revenues of urban transit systems grew at an average annual rate of 5.1 per cent, while government contributions rose at an average rate of 4.0 per cent. As a result, the government contribution's share in total urban transit revenues decreased from 56 to 54 per cent over this period. Addendum Table A7-5 shows revenue services offered by urban transit operators over the 1996 – 2003 period. Figure 7.3 illustrates revenue sources for urban transit operators in 2003.

Urban transit ridership levels decreased in the early 1990s to a low of 1,353 million passengers in 1996. Since then (except for a small decrease in 2001), the number of passengers has increased steadily, reaching 1,560 million in 2003, the highest level in the last two decades. Similarly, distance travelled by urban transit vehicles jumped from 716.4 million to 877 million vehicle-kilometres between 1996 and 2003. This represents an average annual increase of three per cent.

FIGURE 7-3: TOTAL REVENUES BY SOURCE – URBAN TRANSIT SECTOR, 2003



Note: "Other includes charter, school bus and other passenger services.

Source: Transport Canada tabulations, adapted from Canadian Urban Transit Association (CUTA) data

The urban transit fleet has also increased over the same period at an average annual rate of two per cent from 13,049 to 14,970 vehicles in 2003. The main change in fleet composition was the replacement of standard buses with more accessible low-floor buses, from 499 in 1996 to 4,347 in 2003. (See Addendum tables A7-6 to A7-8 for more on Urban Transit revenues, ridership and fleet composition.)

Figure 7-4 shows the total revenues by source in the urban transit sector for 2003.

FIGURE 7-4: LONG-TERM TREND IN URBAN TRANSIT, 1982 – 2003

Source: Statistics Canada, "Passenger bus and urban transit statistics", Cat. 53-215; special tabulations based on Canadian Urban Transit Association (CUTA) data

PASSENGER TRANSPORTATION

Light Vehicle Fleet and Use

The 2003 Canadian Vehicle Survey indicates that there were 17.5 million light vehicles registered in the ten provinces (data refer to in-scope vehicles under 4,500 kilograms gross weight). Of this total, 11.1 million were classified as passenger cars and station wagons, 2.2 million vehicles as vans, 1.5 million as sport-utility vehicles and 2.7 million as pickup trucks. As a group, light trucks and vans represented 36 per cent of the light vehicle fleet. As Table 7-4 shows, cars and station wagons were driven about 171 billion vehicle-kilometres, or 60 per cent of total vehicle-kilometres, while vans and light trucks were driven 114 billion vehicle-kilometres, or 40 per cent of the total. Vans and light trucks, however, were driven about 18,000 kilometres per year on average, 16 per cent more than the 15,400 kilometres for cars and station wagons. Vans and light trucks also had slightly higher vehicle occupancies than passenger cars, accounting for about 41 per cent of light-vehicle passenger-kilometres. This works out to an average occupancy of 1.68 persons per light truck or van compared with 1.58 for cars and station wagons.

TABLE 7-4: DISTRIBUTION OF VEHICLE ACTIVITY BY VEHICLE BODY, 2003

		Light trucks/vans					
	Car / station wagon	*Van*	*Sport-utility*	*Pickup truck*	*Subtotal*	*Other*	***Total***
Vehicles (millions)	11.1	2.2	1.5	2.7	6.4	0.1	**17.5**
Per cent share	63.3	12.6	8.4	15.5	36.4	0.3	**100.0**
Vehicle-km (billions)	170.7	41.7	26.6	45.6	113.9	1.0	**285.6**
Per cent share	59.8	14.6	9.3	16.0	39.9	0.4	**100.0**
Passenger-km (billions)	270.2	78.8	42.6	69.7	191.1	1.3	**462.6**
Per cent share	58.4	17.0	9.2	15.1	41.3	0.3	**100.0**
Litres of fuel (billions)	17.5	5.5	3.2	6.7	15.5	0.1	**33.1**
Per cent share	52.8	16.7	9.7	20.4	46.8	0.4	**100.0**
Distance driven (thousands km)	15.4	19.0	18.1	16.9	17.9	19.0	**16.3**
Persons per vehicle	1.58	1.89	1.60	1.53	1.68	1.34	**1.62**
Fuel efficiency (L/100km)	10.2	13.2	12.1	14.8	13.6	13.3	**11.6**

Note: Figures exclude the territories. Some totals may not add up due to rounding.

Source: Canadian Vehicle Survey, 2003 Annual Averages

There was a wide gap in fuel efficiency between cars and the heavier trucks and vans. Calculated fuel efficiency for cars and station wagons averaged about 10 L/100 km, about 25 per cent lower than the 13.6 L/100 km for vans and trucks.

With few exceptions, the distribution of light vehicles, vehicle-kilometres and passenger-kilometres by province/territory broadly followed the distribution of population. In terms of motorization (number of vehicles per capita), most jurisdictions were clustered around the national average of about 550 vehicles per 1,000 people. The exceptions were Alberta, Saskatchewan and the Yukon with rates 10 per cent higher than the average, and Newfoundland and Labrador and the other two territories with rates at least 13 per cent below the average. Annual average vehicle use was 16,300 kilometres nationally, with a low of about 14,200 for Newfoundland and British Columbia to a high of 19,200 in Nova Scotia. Nunavut averaged less than 9,000 kilometres per year. Average vehicle occupancies were bunched around the national average of 1.6 persons per vehicle. Average light vehicle fuel efficiency varied from a low of 10.9 L/100 km in Nova Scotia to 12.6 L/100 km in Prince Edward Island.

Table 7-5 shows light vehicle statistics by province and territory for 2003.

Table 7-6 shows the distribution of trip purposes for light vehicles. Going shopping or running errands was the most frequently reported purpose, registering nearly 74 billion vehicle-kilometres or 26 per cent of the total kilometres driven. Travel to and from work or school accounted for nearly 24 per cent of vehicle-kilometres, while recreational and related leisure activity made up 18 per cent of the total. The balance, 18.7 per cent, was made up of all other non-work related trips. Vehicle use as part of a job accounted for nearly 40 billion vehicle-kilometres, or 13.6 per cent of total light vehicle kilometres driven. Picking up and delivering goods accounted for 28 per cent of this total (nearly four per cent of light vehicle vehicle-kilometres). Service calls added nearly 21 per cent (2.8 per cent) while all other work purposes made up the balance (seven per cent).

TABLE 7-5: LIGHT VEHICLE STATISTICS BY PROVINCE/TERRITORY, 2003

					Averages			
	Vehicles (thousands)	*Vehicle-kilometres (billions)*	*Passenger-kilometres (billions)*	*Litres of fuel purchased (billions)*	*Vehicles per 1,000 population*	*Average distance driven (thousands)*	*Passengers per vehicle*	*Average fuel efficiency (L/100km)*
Newfoundland and Labrador	247	3.5	6.3	0.4	478	14.2	1.8	11.3
Prince Edward Island	73	1.3	2.1	0.2	533	17.5	1.6	12.6
Nova Scotia	520	10.0	17.7	1.1	555	19.2	1.8	10.9
New Brunswick	437	7.7	12.8	0.9	582	17.6	1.7	12.2
Quebec	4,100	69.0	108.0	8.0	544	16.8	1.6	11.6
Ontario	6,550	105.9	169.0	11.9	529	16.2	1.6	11.2
Manitoba	589	11.0	18.9	1.3	504	18.7	1.7	11.8
Saskatchewan	622	10.9	19.7	1.2	625	17.5	1.8	11.1
Alberta	2,056	34.0	55.1	4.1	642	16.5	1.6	12.0
British Columbia	2,287	32.4	53.2	4.0	545	14.2	1.6	12.3
Yukon Territory	23	0.4	N/A	N/A	741	15.8	N/A	N/A
Northwest Territories	20	0.3	N/A	N/A	459	14.6	N/A	N/A
Nunavut	3	0.02	N/A	N/A	97	8.6	N/A	N/A
Canada	**17,528**	**286.3**	**462.6**	**33.1**	**549**	**16.3**	**1.6**	**11.5**
Percentage distribution								
Newfoundland and Labrador	1.4	1.2	1.4	1.2	87.2	87.0	110.3	98.1
Prince Edward Island	0.4	0.4	0.5	0.5	97.1	106.9	101.1	108.8
Nova Scotia	3.0	3.5	3.8	3.3	101.1	117.3	110.1	94.1
New Brunswick	2.5	2.7	2.8	2.8	106.1	107.7	103.1	105.4
Quebec	23.4	24.1	23.3	24.3	99.1	103.0	96.8	100.8
Ontario	37.4	37.0	36.5	35.9	96.3	99.0	98.7	97.1
Manitoba	3.4	3.8	4.1	3.9	91.8	114.4	106.0	102.4
Saskatchewan	3.5	3.8	4.3	3.7	113.9	107.1	112.0	96.1
Alberta	11.7	11.9	11.9	12.3	117.0	101.1	100.3	103.7
British Columbia	13.0	11.3	11.5	12.1	99.3	86.7	101.6	106.9
Yukon Territory	0.1	0.1	N/A	N/A	135.1	96.9	N/A	N/A
Northwest Territories	0.1	0.1	N/A	N/A	83.7	89.2	N/A	N/A
Nunavut	0.02	0.01	N/A	N/A	17.6	52.8	N/A	N/A
Canada	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Notes: N/A = Not available. Some totals may not add up due to rounding.
Due to high sampling variability in the passenger-kilometre and fuel purchase estimates at the provincial/territorial level, figures for average fuel efficiency should be used with caution.

Source: Canadian Vehicle Survey, 2003 Annual Averages

TABLE 7-6: TRIP PURPOSE FOR LIGHT VEHICLES, 2003

Activity (to or from)	*Vehicle-km (billions)*	*Percentage share*
Work or school	67.3	23.5
Shopping or errands	73.6	25.8
Recreational or social activity	52.3	18.3
Other	53.5	18.7
(Job) picking up or delivering goods	10.8	3.8
(Job) to or from service call	8.1	2.8
(Job) other work purpose	20.0	7.0
	285.6	**100.0**

Note: Figures exclude the territories.

Source: Canadian Vehicle Survey, 2003 Annual Averages

FREIGHT TRANSPORTATION

HEAVY TRUCK FLEET BY PROVINCE/TERRITORY

The Canadian Vehicle Survey also provides information on the heavy truck fleet and its use characteristics. As Table 7-7, shows, there were more than 600,000 trucks registered in Canada in 2003 with a gross vehicle weight of at least 4,500 kilograms. This fleet included 322,000 medium trucks weighing between 4,500 and 15,000 kilograms and 279,000 heavy or Class 8 trucks weighing over 15,000 kilograms. About 75 per cent of the Class 8 heavy truck fleet was concentrated in three provinces, Ontario (37 per cent), Alberta (24 per cent) and Quebec (13 per cent). The medium truck fleet was concentrated in five provinces, which shared about 90 per cent of the total. The distribution of vehicle-kilometres was heavily tilted in favour of heavy trucks, which accounted for over 18 billion in 2003, versus 6.2 billion for medium trucks. The distribution of heavy truck

TABLE 7-7: CANADA'S HEAVY TRUCK FLEET, 2003

	Vehicles (thousands)		Vehicle-km (millions)		Percentage distribution			
					Vehicles		Vehicle-km	
	Medium	Heavy	Medium	Heavy	Medium	Heavy	Medium	Heavy
Newfoundland and Labrador	3.3	2.6	50	143	1.0	0.9	0.8	0.8
Prince Edward Island	1.6	2.5	12	37	0.5	0.9	0.2	0.2
Nova Scotia	7.6	7.4	154	362	2.4	2.7	2.5	1.9
New Brunswick	5.1	3.7	91	74	1.6	1.3	1.5	0.4
Quebec	48.6	37.2	1,108	3,579	15.1	13.3	18.0	19.3
Ontario	69.3	104.0	1,826	8,031	21.5	37.3	29.6	43.3
Manitoba	9.3	13.2	148	1,069	2.9	4.8	2.4	5.8
Saskatchewan	36.5	23.5	295	1,011	11.3	8.5	4.8	5.4
Alberta	81.6	68.1	1,345	3,693	25.3	24.4	21.8	19.9
British Columbia	57.7	13.8	1,117	391	17.9	5.0	18.1	2.1
Yukon Territory	0.9	1.2	11	110	0.3	0.4	0.2	0.6
Northwest Territories	0.5	1.3	7	67	0.1	0.4	0.1	0.4
Nunavut	0.2	0.1	1	1	0.05	0.03	0.02	0.01
Canada	**322.0**	**278.6**	**6,164**	**18,568**	**100.0**	**100.0**	**100.0**	**100.0**

Notes: Medium trucks have a gross weight between 4.5 tonnes and 15 tonnes; heavy trucks have a gross weight of 15 tonnes or more.
Some totals may not add up due to rounding.

Source: Canadian Vehicle Survey, 2003 Annual Averages

vehicle-kilometres was even more concentrated in Ontario, Alberta and Quebec, which combined accounted for over 80 per cent of total kilometres driven.

Not surprisingly, heavy trucks were driven much farther, on average, than medium trucks, given similar numbers of trucks and a huge difference in vehicle-kilometres. On average, heavy trucks were driven nearly 67,000 kilometres per year, three and a half times more than the 19,000 kilometres driven by medium trucks. The variation in heavy truck average distance driven by province was also substantial, ranging from a low of 15,000 per vehicle in Prince Edward Island to 96,000 per vehicle in Quebec. Medium truck use across jurisdiction also varied widely, from a low of only 8,000 in Prince Edward Island (6,000 in Nunavut) to over 26,000 in Ontario.

HEAVY TRUCK VEHICLE CONFIGURATIONS

Table 7-8 provides a different perspective on the medium/heavy truck fleet based on truck configuration. In the ten provinces, there were 375,000 registered straight trucks (the power unit and the cargo area combined in a single chassis), 170,000 tractor-trailers (the power unit pulls the cargo area in a separate trailer) and about 55,000 vehicles classified as other vehicles. While tractor-trailer combinations accounted for about 30 per cent of the fleet, they accounted for nearly two thirds of the truck vehicle-kilometres, or 15.5 billion. Once again this was due to the great difference in average distance driven per vehicle. Straight trucks were driven a little over 20,000 kilometres annually, while tractor-trailers were driven over 90,000 kilometres per year. Heavy truck fuel efficiency averaged about 36 L/100 km, with straight trucks averaging 32 L/100 km and tractor-trailers averaging about 40 L/100km.

TABLE 7-8: HEAVY TRUCK STATISTICS, BY CONFIGURATION, 2003

	Vehicles		Vehicle-km		Fuel (litres)		Average distance driven	Fuel efficiency
	(thousands)	Share	(billions)	Share	(billions)	Share	(thousands of kilometres)	(Litres/100km)
Straight truck	376	62.8	8.0	32.4	2.5	28.4	21.2	31.9
Tractor trailer	169	28.0	15.7	63.2	6.1	68.8	92.7	39.6
Bus/other	55	9.2	1.0	4.5	0.2	2.7	20.0	22.1
Heavy trucks	600	100.0	24.7	100.0	8.9	100.0	41.1	36.3

Note: Figures exclude the territories and buses. Some totals may not add up due to rounding.

Source: Canadian Vehicle Survey 2003

Table 7-9 provides further detail on heavy truck vehicle configurations. Medium trucks were characterized by the straight truck configuration, as about 80 per cent of the kilometres driven were with this format. Heavy trucks, by contrast, were dominated by various tractor-trailer combinations. The most popular was a tractor and one trailer (the conventional 18 wheeler), which accounted for over 70 per cent of the heavy truck vehicle-kilometres. Straight trucks accounted for only 14 per cent of the heavy truck vehicle-kilometres.

TABLE 7-9: HEAVY TRUCK VEHICLE-KILOMETRES BY VEHICLE CONFIGURATION, 2003

	Medium (per cent)	*Heavy (per cent)*
Straight truck	79.3	14.2
Tractor only	0.1	3.1
Tractor and 1 trailer	3.9	72.0
Tractor and 2 trailers	-	9.0
Tractor and 3 trailers	-	0.0
Other	16.8	1.6
Total vehicle-km (billions)	**6.1**	**18.4**

Note: Figures exclude the territories.

Source: *Canadian Vehicle Survey 2003*

Table 7-10 shows the typical uses of medium and heavy trucks. Medium trucks were used for a variety of purposes, with 62 per cent of the vehicle-kilometres taken up with carrying goods or equipment, a traditional freight-hauling role, while 33 per cent was devoted to non-freight carrying functions such as making service calls. These latter functions illustrate that medium-sized trucks were not confined solely to the for-hire or private "trucking" business. Of the 6.1 billion vehicle-kilometres driven in the 10 provinces, about five per cent were done empty.

TABLE 7-10: USE OF HEAVY VEHICLES, 2003

	Medium trucks		*Heavy trucks*	
	Vehicle-kilometres (billions)	*Share (per cent)*	*Vehicle-kilometres (billions)*	*Share (per cent)*
Carrying goods/equipment	3.8	62	14.7	80
Empty	0.3	5	2.4	13
Other work purpose	2.0	33	1.3	7
Total	**6.1**	**100**	**18.4**	**100**

Note: Figures exclude the territories.

Source: *Canadian Vehicle Survey 2003*

Heavy truck activity was dominated by the conventional role of hauling goods or equipment, accounting for 80 per cent of total vehicle-kilometres. Less than 10 per cent of vehicle-kilometres was for other work purposes, and about 13 per cent was made empty.

TRUCKING FREIGHT TRANSPORTATION

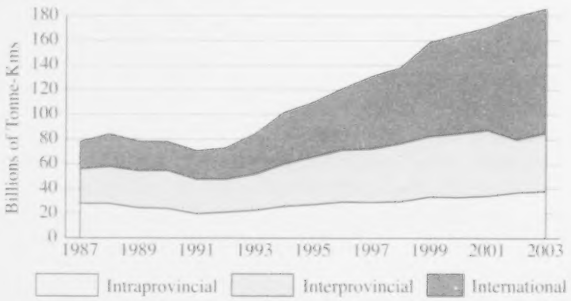
TRUCK TRAFFIC BY SECTOR

Between 1993 and 2003, for-hire truck[8] traffic rebounded from a slowdown due to the 1990 – 1992, jumping from 84.6 to 185.0 billion tonne-kilometres. The transborder sector dominated, with an annual average growth rate of 11.4 per cent. This was more than twice the rate in domestic trucking activities, which was 5.5 per cent. Domestic trucking activities include intraprovincial and interprovincial activities, which grew at rates of 4.4 per cent and 6.3 per cent a year, respectively.

In terms of value, about 63 per cent of Canada-U.S. trade moved by truck in 2003. Commodities shipped by truck from/to the U.S. totalled $335 billion, with exports accounting for $173 billion. Preliminary 2004 trade data showed an increase of six per cent in the value of cargo shipped by truck to the U.S. but less than per cent growth for the reverse movement. Factors such as uncertain conditions in the U.S. due to war in Iraq, high fuel prices, and increased security measures at border points since September 2001, may have contributed to a slower growth in trucking traffic, combined with an appreciation of the Canadian dollar, which has made Canadian goods relatively more expensive to American consumers.

Figure 7-5 illustrates the growth of Canadian for-hire trucking traffic between 1987 and 2003. Table A7-9 in the Addendum provides the data in a tabular form.

FIGURE 7-5: TONNE-KILOMETRES OF FREIGHT MOVED – CANADA-BASED FOR-HIRE TRUCKING, 1987 – 2003



Note: For-hire trucking carriers with annual operating revenues of $0.5 million or more (1988/89) and of $1 million or more (1990 – 2003).

Source: *Statistics Canada, Trucking in Canada, Cat. 53-222 and Special tabulations*

8 Including Canadian domiciled long-distance for-hire trucking firms with annual operating revenues of $1 million or more.

Commodities and Trucking Flows

In 2003, domestic and transborder for-hire truck traffic by Canadian firms generated revenues of $8.8 billion and $8.0 billion, respectively. Six groups of commodities represented 82 per cent of transport revenues. They are: manufactured products (26 per cent), food products (17 per cent), forest products (13 per cent), metal and steel products (nine per cent), automobile and transport products (eight per cent), and plastic/chemical products (eight per cent). In terms of volume, measured in tonne-kilometres, the same six commodities also dominated in the same proportion (i.e., 82 per cent of the total).

Ontario dominated in all market segments, with 36 per cent of intraprovincial trucking traffic, 34 per cent of interprovincial trucking traffic and 45 per cent of total transborder traffic hauled by trucks. At the interprovincial level, the largest movements were between Ontario and Quebec (11.7 billion tonne-kilometres), representing almost 22 per cent of total interprovincial trade by for-hire trucks in volume. At the transborder level, the heaviest traffic flows involved those between Ontario and the U.S. central region (19.3 billion tonne-kilometres), and Ontario and the U.S. southern region (12.7 billion tonne-kilometres). For additional information on volume and trucking flows, please see tables A7-10 to A7-13 in the Addendum.

Canada–U.S. Border Crossing Activity

Heavy truck activity across the Canada–U.S. border grew almost two per cent in 2004. This returned activity to the 2002 level of nearly 13.5 million two-way trips but it was still short of the peak level of 13.6 million trips in 2000. This is the fourth straight year that crossing activity has remained below the 2000 peak. The levelling off of activity likely reflects uncertain economic conditions persisting after 9/11 and the strong appreciation of the Canadian dollar in 2004. Car crossings were off another one per cent from 2003 to fall below 60 million trips, the lowest level since 1986.

Addendum Tables A7-14 and A7-15 compare activity at the 20 largest border crossings from 2000 to 2004 for trucks and cars/other vehicles, respectively.

PRICE, PRODUCTIVITY, FINANCIAL PERFORMANCE

Trucking Industry

In 2003, the revenues of trucking firms rose by 6.7 per cent to reach $21 billion, just below the annual average of 6.9 per cent from 1998 to 2003. Trucking rates increased on average by 2.9 per cent and output grew by an estimated 3.1 per cent, compared with a 4.3 per cent annual increase over the 1998 – 2003 period. Both domestic and transborder traffic rebounded from their 2002 decreases, jumping 0.8 and 4.5 per cent, respectively.

Total factor productivity in the trucking industry fell by 0.9 per cent in 2003. This second consecutive decrease in productivity has reduced annual productivity gains to less than one per cent over the 1998 – 2003 period. Unit costs rose by four per cent in 2003, higher than the 2.4 per cent average annual increase since 1998.

In 2003, the average industry operating ratio reached 94.9 per cent, slightly higher than the average ratio of 94.4 for the 1998 – 2002 period.

Urban Transit Systems

In 2003, revenues (excluding subsidies) of urban transit carriers rose by 4.6 per cent. Alberta carriers registered the strongest growth, at 10.6 per cent, due to increases in both prices (5.1 per cent) and output (5.3 per cent). Overall, total transit output in Canada increased by 1.8 per cent while prices rose by 2.8 per cent.

Transit systems remain among the most labour- and capital-intensive of all transport industries. These two factors of production represented 50 and 29 per cent of total costs, respectively.

In 2003, total factor productivity of transit systems increased by 0.5 per cent. Improvements in fuel and labour efficiency of 9.0 and 3.5 per cent, respectively, managed to offset productivity declines in capital (1.0 per cent) and in other factors of production (7.2 per cent).

Transit costs per unit of output rose by 5.4 per cent in 2003. Since 1998, total unit costs have increased by 15.4 per cent, for an annual average increase of 2.9 per cent.

The total cost of transit systems was estimated at $5.4 billion in 2003. Cost recovery was measured at 42.3 per cent, slightly below the level of the previous three years. Annual operating subsidies rose to $1.8 billion, $216 million above the average of the previous three years. Capital subsidies increased by 22 per cent to $873 million.

Cost recovery ratios for 2003 were 44.8 per cent in Ontario, 41 per cent in Quebec, 39.3 per cent in British Columbia and 33.8 per cent in Alberta. Urban transit operations in the rest of Canada (ROC), which accounts for only five per cent of overall transit revenues, consistently show higher cost recoveries rates than the four selected provinces. This ratio has been hovering around 50 per cent since 1996 and was 48.8 per cent in 2003. Table 7-11 provides details on the performance of transit systems for selected regions in 2003.

TABLE 7-11: SELECTED PROVINCIAL SYSTEMS INDICATORS, 2003

	Quebec	*Ontario*	*Alberta*	*B.C.*	*Canada*
Price levels (Canada = 100)	87.2	117.7	74.4	94.0	100.0
Total unit cost (Canada = 100)	90.0	111.2	93.2	101.3	100.0
Cost recovery (in %)	41.0	44.8	33.8	39.3	42.3
Revenue shortfall per passenger ($)	1.55	2.22	2.39	2.48	2.02

Source: Transport Canada, based on Statistics Canada and CUTA information

MARINE TRANSPORTATION 8

In 2003, marine freight traffic was up 8.5 per cent from 2002 as a result of increases in domestic flows, Canada-U.S. traffic and in overseas traffic.

MAJOR EVENTS IN 2004

Legislative and Regulatory Changes and Initiatives

Canada Shipping Act and Regulatory Reform under the *Canada Shipping Act, 2001*

Although the *Canada Shipping Act*, 2001 (CSA 2001) received Royal Assent on November 1, 2001, the Act does not actually come into force until the regulations needed in support of it are in place.

These regulations are being dealt with in two phases. In Phase 1, more than 50 existing regulations are being reformed and streamlined into 17. In Phase 2, the remaining regulations are being modernized to be consistent with the requirements of the new Act. The CSA 2001 will come into force once the regulations being developed in Phase 1 have been completed; this is expected by the end of 2006. Until then, the existing *Canada Shipping Act* (CSA) and its related regulations remain in full force and effect.

The CSA is the principal piece of legislation governing personal safety and environmental protection in Canada's marine sector. It applies to Canadian vessels operating anywhere and to foreign vessels operating in Canadian waters. By way of two Orders in Council, one in December 2003 and one in March 2004, the Governor in Council, on the recommendation of the Prime Minister, transferred CSA legislative and regulatory responsibilities relating to pleasure craft safety, marine navigation services, pollution prevention and response, and navigable waters, from Fisheries and Oceans Canada to Transport Canada.

With these added responsibilities, Transport Canada conducted cross-country public consultations throughout 2004 on the regulations being developed in Phase 1. These consultations took place primarily at the spring and fall regional and national meetings of the Canadian Marine Advisory Council (CMAC). Several of the individual projects have also conducted outreach sessions with stakeholders at various strategic locations across Canada. By the end of 2004, the Regulatory Reform Project's formal consultation phase had, for the most part, concluded. There will still be a few individual projects consulting in the spring of 2005, but most have now finished formal consultations and are moving into the legal drafting phase.

The 17 streamlined regulations to come out of Phase 1 include Administrative Monetary Penalties, Ballast Water, Boating Restrictions, Cargo, Collision, Competency of Operators of Pleasure Craft, Environmental Response, Fire Safety, Fishing Vessel Safety, Heritage Wreck, Load Lines, Marine Personnel, Pleasure Craft, Prevention of Pollution from Vessels, Small Commercial Vessels, Vessel Clearance, and Vessel Registration and Tonnage. For more information on the CSA 2001 Regulatory Reform Project, visit www.tc.gc.ca/marinesafety/menu.htm.

Marine Liability Act

Compulsory insurance for commercial passenger vessels

On August 8, 2001, the Government of Canada enacted the *Marine Liability Act* (MLA) under Chapter 6 of the Statutes of Canada. The MLA consolidated various maritime liability regimes, including those for passengers, goods and pollution.

In early 2003, Transport Canada began consultations on the development of a compulsory insurance regime for vessels that carry passengers for commercial or public purposes, as per Section 39, Part 4 of the MLA. Transport Canada announced its position on the development of a compulsory insurance regime in August 2003 and is now developing appropriate regulations.

Ship Source Pollution Prevention — Transport Canada, Environment Canada and the Department of Fisheries and Oceans are co-operating to address a variety of issues related to the prevention of ship source pollution, including: accelerating the phase-out of single-hulled tankers; eliminating sub-standard ships; introducing a "green ship" program for Canada; seeking higher penalties from courts for ship-source pollution; optimizing surveillance and enforcement efforts; and improving shore waste reception facilities. New regulations under the CSA 2001 will expand existing provisions for sewage and air pollution, update provisions for garbage, and introduce new requirements for anti-fouling systems and ballast water discharges.

Supplementary Fund Protocol

In May 2003, the International Maritime Organization (IMO) adopted a Protocol to the 1992 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1992 (1992 Fund Convention). The Protocol establishes a voluntary Supplementary Fund, which provides a third layer of compensation for claimants of oil pollution damages in states that ratify the Protocol. Claimants are now entitled to compensation up to $1.5 billion per incident, almost four times the current $400 million maximum. As Canada is a party to the 1992 Fund Convention, it is considering adoption of the new Protocol based on national consultations in 2005 to be followed by a Cabinet decision on ratification. Currently, Transport Canada is preparing a discussion paper for these consultations.

National Marine Conference

Transport Canada, with the help of the St. Lawrence Economic Development Council, the St. Lawrence Shipoperators Association and the Chamber of Maritime Commerce, hosted its second National Marine Conference in November 2004 in Montreal. The theme of the conference was "Shortsea Shipping: The Marine Contribution to Intermodal Transportation."

Shortsea shipping refers to the movement of cargo and passengers by water over relatively short distances and without crossing any oceans. Essentially, it is coastal and inland shipping, but it can include crossborder trade with the United States and Mexico.

The conference investigated how the marine mode can better coordinate with other modes in order to stimulate shortsea shipping opportunities in Canada. A wide range of public and private decision-makers, as well as transportation industry stakeholders, exchanged views on how to better use and integrate shortsea shipping. These included issues related to modal integration, market feasibility, regional and international perspectives, and public policy considerations.

Second Joint Ministerial Conference of the Paris and Tokyo Memoranda of Understanding (MOU) on Port State Control

The international conference took place on November 2-3, 2004, in Vancouver, British Columbia. The event marked the second time that Canada brought together member countries of the Paris and Tokyo MOUs, and MOU observer states and organizations, to focus on issues related to port state control. The first such conference was held in March, 1998.

The purpose of the conference was the signature by the Paris and Tokyo MOU members and observers of a Ministerial Declaration that detailed new measures to be implemented by administrations in their continuing efforts to eliminate sub-standard ships worldwide. The Declaration focussed on the development and implementation of standards to promote a wider safety and security culture throughout the entire maritime industry; to protect the global maritime environment; and to safeguard crews with respect to their living and working conditions on board ships.

Stakeholder Engagement

Transport Canada undertook several studies and initiatives in 2004 to evaluate a comprehensive range of issues, factors and trends driving marine competitiveness and market challenges, both on the domestic and international fronts. One of the major goals of these studies was to promote a more efficient and effective marine transportation system in Canada by strengthening partnerships with marine industry stakeholders through maintained and enhanced continuous dialogue and information sharing.

National Marine and Industrial Council

An industry–government forum, the National Marine and Industrial Council, was established to promote awareness of the benefits of the Canada marine industry as an economic generator, and to provide a venue for discussing marine policy issues with leaders from the marine industry and deputy ministers of departments that have direct influence on the marine transportation sector.

The Council is made up of industry executives and federal government senior officials. The deputy ministers of Transport Canada, Industry Canada, Fisheries and Oceans Canada, and International Trade Canada represent the federal government. Industry representatives include cargo shippers, domestic and international shipowners, port operators and marine service providers from across the country. The inaugural meeting was held in May 2004 in Ottawa. A subsequent meeting was held in September 2004 in Montreal.

Marine Atlantic Advisory Committee

In November 2004, an advisory committee was formed to study a wide range of issues and to identify long-term strategies for stabilizing Marine Atlantic's ferry service operations. The Committee held consultations with both stakeholders and representatives from Marine Atlantic in January 2005 and is expected to provide a final report to the Minister of Transport.

Marine Industry Benefits Study

Transport Canada, in partnership with Canada's major marine industry associations, completed an evaluation of the economic impact of marine transportation in Canada. The Marine Industry Benefits Study investigated the sector's contribution by drawing on economic models that show the direct, indirect and induced impacts of its significant contribution to the Canadian economy.

Canada Marine Act Review

Transport Canada used the results of these studies and initiatives — along with other endeavours undertaken in collaboration with industry and government partners — to help support the Government of Canada's assessment of future amendments to the *Canada Marine Act* (CMA). The CMA streamlined marine legislation governing services provided by the federal government in the marine sector, allowed the establishment of Canada Port Authorities and the continued divestiture of certain harbour beds and port facilities, and facilitated the commercialization of the St. Lawrence Seaway. It also contained provisions for further commercializing federal ferry services and for pilotage operations.

INFRASTRUCTURE

Canada's Ports and Harbours System

Canada's ports and harbours provide crucial links between economic activities and otherwise inaccessible markets. Canada's major ports are vital gateways in the national transportation system, connecting with both the rail and road networks.

Following the announcement of the National Marine Policy, the federal government initiated a plan to reorganize Canada's ports system in December 1995. It has since implemented a restructuring process to commercialize marine infrastructure. The National Marine Policy, which has been realized through the Canada Marine Act (CMA), specifies three categories of ports to facilitate this restructuring: (1) Canada Port Authorities (CPAs), (2) regional/local ports, and (3) remote ports.

Under the National Marine Policy, 19 major Canadian ports have been deemed vital to Canada's domestic and international trade. The following Canada Port Authorities have also met criteria pertaining to financial self-sufficiency, diversified traffic and intermodal connections: Fraser River, Vancouver, North Fraser, Nanaimo, Prince Rupert, Port Alberni, Thunder Bay, Windsor, Toronto, Hamilton, Montreal, Quebec City, Trois-Rivières, Saguenay, Sept-Îles, Saint John, St. John's, Belledune and Halifax. These include former Canada Ports Corporation's major divisional ports as well as former harbour commissions. Independently managed, these 19 CPAs are essential links in Canada's domestic and international trade. The Port of Oshawa remains the last harbour commission operating in Canada.

CPAs are incorporated by Letters Patent for the purpose of operating a particular port. As agents of the Crown under the CMA for certain purposes, CPAs possess the power to engage in activities related to shipping, navigation, transporting passengers and goods, and handling and storing goods. CPAs may also engage in other activities deemed in the Letters Patent to be necessary to support port operations, although they are not agents of the Crown with respect to these activities.

Letters Patent are issued to grant a special right, in this case the right to operate and manage a port. CPAs cannot issue shares. They may be given Crown land to operate and manage, but not to own. They may, however, acquire and own land in their own name. In order to cover costs, CPAs have the authority to establish fair and reasonable fees for use of the facilities or services provided at the port. They may not discriminate among users of the port, but they may differentiate in their fees and services based on the volume or value of goods or on any basis that is generally commercially accepted.

CPAs are required to demonstrate public accountability. Each board of directors is composed of between seven and eleven members, as set out in the CMA. (All CPAs have seven members, except for Vancouver, which has nine). Each board is responsible for appointing the officers of the CPA. A majority of each board is appointed in consultation with port users. In addition, the federal and respective provincial and municipal governments each appoint one director.

The majority of Transport Canada-owned ports are regional/local ports, which range from ports with a high volume of regional and local traffic to smaller ports with little or no commercial activity. In accordance with the Port Divestiture Program, the federal government is terminating its operational and ownership interests in regional/local ports by transferring them to other federal departments, provincial governments or local interests, including municipal authorities, community organizations or private interests.

Transport Canada continues to administer remote ports that serve as the primary transportation portals for isolated communities. Transport Canada will retain control and administration of such facilities unless local stakeholders are willing to take over ownership of them.

Port Divestiture

The Port Divestiture Program was originally scheduled to end on March 31, 2002; however, it has been extended by Cabinet until March 31, 2006. Therefore, Transport Canada will continue to transfer ownership and operations of its regional/local ports. Giving local communities more control over port operations is part of the federal government's efforts to modernize Canada's marine system by instilling commercial discipline and efficiency. This will ultimately lead to a more effective and efficient port system with local accountability. By having greater autonomy, ports will be able to apply more effective business principles at the same time as they promote employment and economic growth. Once ports have been transferred, Transport Canada ends its operational role, which includes directly enforcing regulations, collecting user fees, and monitoring port operations.

Of the 549 public ports and port facilities originally controlled and administered by Transport Canada before the National Marine Policy came into force, 457 have been transferred, deproclaimed or demolished, or have had Transport Canada's interests terminated. As of December 31, 2004, Transport Canada still had 92 sites under its control. In addition, there are 18 sites where facilities have been transferred but cannot be deproclaimed because the harbour bed has not yet been divested. For detailed port information, see tables A8-1 and A8-2 in the Addendum.

Table 8-1 summarizes the classification of ports as of December 31, 2004.

TABLE 8-1: PORT CLASSIFICATIONS AS OF DECEMBER 31, 2004

	Federal	*Provincial*	*Local*	*Total*
Federal Agency Ports				
Canada Port Authorities	19	N/A	N/A	19
Harbour Commissions	1	N/A	N/A	1
Ports Operated by Transport Canada				
Regional/Local	66	N/A	N/A	66
Remote	26	N/A	N/A	26
Ports Transferred[1]				
From Transport Canada	65	40	116	221
Status of other former Transport Canada Ports				
Demolished	7	N/A	N/A	7
Interests terminated	18	N/A	N/A	18
Deproclaimed[2]	211	N/A	N/A	211

Note: Additional detailed information on ports is presented in tables A8-1 and A8-2 in the Addendum, including a summary of the provincial distribution of the ports administered by Transport Canada from 1996 to 2004 and a summary of the divestiture status of regional/local and remote ports on a regional basis.

N/A = Not available.

1. Includes 18 sites where facilities have been transferred but harbour bed has not yet been deproclaimed, 64 sites that were transferred to the Department of Fisheries and Oceans and one site that was transferred to Health Canada.
2. Public Harbours deproclaimed between Jdune 1996 and March 1999.

Source: *Transport Canada*

As of December 31, 2004, 65 sites had been transferred to other federal departments and 40 to provincial governments, while 116 sites were divested to local interests. In addition, 25 sites have either been demolished or have had Transport Canada's interest terminated (through lease or licence terminations).

Since the start of the program, 271 public ports have been deproclaimed. Of this number, archival research identified a further 26 harbours in addition to the original 549 port sites identified in the National Marine Policy. Transport Canada continues to administer 66 regional/local ports and 26 remote ports nation-wide.

Financial Performance

This section used results for 2003 because audited financial statements of Canada Port Authorities for 2004 were not available in time. In addition, some 2002 figures have been restated to reflect changes in accounting policies, as reported in the 2003 audited financial statements. For detailed financial information, see Addendum tables A8-3 to A8-5.

Generally, 2003 was a positive year for most CPAs. In 2003, CPAs had total operating revenues of $299 million, a nine per cent increase over the 2002 total of $275 million. Vancouver and Montreal accounted for approximately 57 per cent of this total. Eleven of the 19 CPAs reported an increase in revenues, ranging from $0.05 million to $7.6 million. Halifax and Vancouver reported the highest increases, at $7.6 million (41 per cent) and $7.5 million (seven per cent), respectively.

Overall expenditures increased by $15.9 million, with individual increases ranging from $0.03 million to $9.2 million. Only five CPAs reported decreases, ranging from $0.05 million to $1.51 million.

The overall operating ratio for the CPAs was approximately 79 per cent in 2003. Individual ratios ranged from 42 to 157 per cent. The return on assets stood at three per cent. Trois-Rivières (15 per cent) and Saguenay (14 per cent) had the highest return on assets.

In 2003, five of the nineteen ports reported increases in their net income, ranging from $0.3 million to $3.8 million, for a combined increase of $8.4 million. The ports reporting decreases had a combined loss of $5.8 million, with ranges of $0.02 million to $1.5 million. While the majority of CPAs have relied on operating revenues to fund capital projects, Transport Canada has recently experienced an increase in the number of requests by CPAs for expanded borrowing limits. This indicates that a large number of CPAs are planning to make significant capital investments in coming years. For example, the Port of Vancouver is planning for investments of over $1 billion in the next ten years to accommodate growing container trade with Asia. The Minister of Transport recently issued Supplementary Letters Patent to increase Vancouver's borrowing limit to $510 million from its former limit of $225 million.

Tonnage for CPAs increased from 215 million tonnes in 2002 to 227 million tonnes in 2003. Five CPAs accounted for 69 per cent of total cargo by volume: Vancouver (30 per cent), Saint John (11 per cent), Sept-Îles (10 per cent), Montreal (9 per cent) and Quebec City (nine per cent). The revenues per tonne increased from $1.30 in 2002 to $1.31 in 2003, while expenses per tonne increased from $1.03 to $1.04.

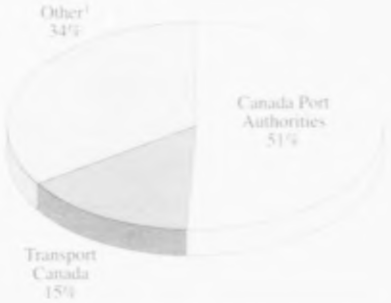
At public ports still under Transport Canada control, gross revenues in fiscal year 2003/04 were $12.4 million, while expenses were $21.8 million. Capital expenditures were $5.4 million, while $1.7 million was spent in grants and contributions for port divestiture transfers. The result was a total net loss of $16.5 million in 2003/04. Addendum Table A8-6 provides details.

Port Traffic

Based on preliminary data provided by Statistics Canada, Canada's ports handled 443 million tonnes of cargo in 2003 (latest available data), up about nine per cent from 2002.

Figure 8-1 shows traffic shares by port groups in 2003, based on port classification as of December 31, 2003.

FIGURE 8-1: TRAFFIC SHARES BY PORT GROUPS, 2003



1 Includes Fisheries and Oceans Canada, provincial and municipal governments, and private facilities.

Source: Statistics Canada

Actual traffic (cargo handled) at some CPAs in 2003 included: Halifax, 14.2 million tonnes; Montreal, 20.3 million tonnes; Prince Rupert, 4.0 million tonnes; Quebec City, 20.3 million tonnes; Saguenay, 0.44 million tonnes; Saint John, 25.9 million tonnes; Sept-Îles, 22.7 million tonnes; Thunder Bay, 7.8 million tonnes; Toronto, 1.8 million tonnes; Vancouver, 67.9 million tonnes; and Fraser River, 13.7 million tonnes.

CPAs handled 227 million tonnes, the largest amount of port traffic in 2003. This accounted for 51 per cent of the total. Transport Canada facilities moved 66 million tonnes of cargo, which accounted for 15 per cent of the total. The "other" facilities — which includes those managed privately, those managed by or on behalf of the Department of Fisheries and Oceans and those managed by provincial and municipal governments — handled 148 million tonnes, or 34 per cent of the total cargo. In this category, Come-By-Chance, Newfoundland, with approximately 43.7 million tonnes, handled the most cargo, followed by Port Hawkesbury, Nova Scotia, with 22.9 million tonnes. The one port still classified as a Harbour Commission as of December 31, 2003, handled approximately 180,000 tonnes. The remaining 170 ports reporting cargo tonnage to Statistics Canada handled the balance of cargo. (See Addendum Table A8-7.)

Small Craft Harbours Program

Fisheries and Oceans Canada

The Small Craft Harbours Program (SCH) at the Department of Fisheries and Oceans currently owns 1,240 harbours across Canada, 1,007 fishing harbours and 233 recreational facilities. The department's long-term objective is to retain only core active fishing harbours. About 750 are targetted to be kept by the program in the regions. Other harbours (i.e., all recreational and low-activity inactive fishing) will be divested.

Fishing harbours

Since the late 1980s, the SCH program has supported the creation of local harbour authorities (HA) to manage the commercial fishing harbours in their communities. The SCH leases the harbour to the harbour authorities, which are local, non-profit organizations, made up of fishers and other harbour users that provide services, maintenance and harbour management. As of December 31, 2004, harbour authorities managed 679 sites across Canada, about 91 per cent of the SCH program target. Fishing harbours not generating enough community interest to form a harbour authority will be divested or, if necessary, demolished. Such harbours usually have little or no activity and a negligible impact on the commercial fishing industry or the community at large. To date, 286 fishing harbours have been divested and 84 are in the final stage of divestiture.

Table 8-2 shows how many fishing harbours remained in the SCH portfolio as of December 31, 2004, by region and type of management.

TABLE 8-2: SCH FISHING HARBOURS BY MANAGEMENT TYPE AND REGION, AS OF DECEMBER 31, 2004

	Harbour Authorities	*Small Craft Harbours*	*Total by Region*
British Columbia[1] and Yukon[2]	72	76	148
Central and Arctic[2]	32	37	69
Quebec	50	34	84
Maritimes and Gulf	281	48	329
Newfoundland and Labrador	244	133	377
Total	**679**	**328**	**1,007**

1. Totals include 47 mooring buoy sites in British Columbia.
2. There are no Harbour Authorities in Northwest Territories, Nunavut or the Yukon.

Source: Small Craft Harbours, Department of Fisheries and Oceans.

Recreational harbours

The SCH program intends to divest all 845 recreational harbours originally in its inventory. Since 1994/95, the SCH has divested, or is in the final stages of divesting, 647 recreational harbours (77 per cent of its original total). The SCH disposal strategy, approved by Treasury Board in 1995, permits disposals at a consideration of $1.00, subject to conditions that include a requirement to maintain public access for at least five years. Before a harbour is transferred, environmental assessments and reasonable repairs are done to ensure it is transferred in a safe and reasonable condition. Recipients are mainly municipalities, local non-profit organizations, First Nations or other federal departments. In the absence of a public body interested in acquiring the facilities, they are offered at market value to the general public. As a last resort, if there is neither public nor private interest in the facilities, they are demolished. The recreational harbour divestiture program is expected to continue for several more years.

Tables 8-3 to 8-5 summarize, by region, the status of the SCH recreational harbour divestiture program (Table 8-3), recipients of harbours divested (Table 8-4) and type of management of the harbour sites still in the SCH inventory (Table 8-5).

TABLE 8-3: SCH RECREATIONAL HARBOURS DIVESTED BY REGION, AS OF DECEMBER 31, 2004

	Fully Divested 1995/2003	Fully Divested 2004/05	Final Stage of Divestiture	Total Divested	Remainder to be Divested	Regional Total
British Columbia and Yukon	53	1	2	56	9	65
Central and Arctic	268	5	14	287	158	445
Quebec	201	4	19	224	28	252
Maritimes and Gulf	78	0	1	79	1	80
Newfoundland and Labrador	1	0	0	1	1	2
National Totals	**601**	**10**	**36**	**647**	**197**	**844**

Source: Small Craft Harbours, Department of Fisheries and Oceans

TABLE 8-4: RECIPIENTS OF DIVESTED SCH RECREATIONAL HARBOURS, AS OF DECEMBER 31, 2004

	Province[1]	Municipality	Private Sector	Other[2]	Total by Region
British Columbia and Yukon	51	1	1	3	56
Central and Arctic	18	199	20	50	287
Quebec	3	176	2	44	225
Maritimes and Gulf	4	19	4	51	78
Newfoundland and Labrador	0	1	0	0	1
Total	**76**	**396**	**27**	**148**	**647**

1. Just over half of these properties were subject to provincial reversionary interests.
2. "Other" in the context of the divestiture of recreational harbours refers to sites that have been transferred to local non-profit organizations, First Nations or other federal departments, as appropriate.

Source: Small Craft Harbours, Department of Fisheries and Oceans

TABLE 8-5: SCH RECREATIONAL HARBOURS BY MANAGEMENT TYPE, AS OF DECEMBER 31, 2004

	Managed Under Lease	Small Craft Harbours	Other[1]	Total by Region[2]
British Columbia and Yukon	2	0	7	9
Central and Arctic	107	40	11	158
Quebec	2	25	0	28
Maritimes	0	1	0	1
Newfoundland and Labrador	0	1	0	1
Total	**112**	**67**	**18**	**197**

1. "Other" refers to a variety of management and non-management situations. Some construction works, such as shoreline reinforcement or breakwaters, are largely stable and do not require ongoing management. Some facilities are part of a larger development (i.e. a marina), and are managed as part of that development. In other cases, facilities no longer exist at the site and there is nothing to manage.
2. Remaining recreational harbours in small craft harbours inventory as of December 31, 2004.

Source: Small Craft Harbours, Department of Fisheries and Oceans

MARINE PILOTAGE

In Canada, regional pilotage authorities direct and control navigation and/or ship handling of vessels through coastal and inland waterways in a safe and efficient manner. Each authority responds to the particular requirements of marine traffic and to the geographic and climatic conditions of the waterways in its region. There are four regional pilotage authorities in Canada: Atlantic (APA), Laurentian (LPA), Great Lakes (GLPA) and Pacific (PPA).

TABLE 8-6: PILOTAGE AUTHORITY FINANCIAL RESULTS, 2004

(Thousands of dollars)

Pilotage Authority	Revenues	Expenditures	Net Income (Loss)
Atlantic Pilotage Authority (APA)	16,438	15,463	975
Laurentian Pilotage Authority (LPA)	51,335	54,722	(3,387)
Great Lakes Pilotage Authority (GLPA)	13,820	15,902	(2,082)
Pacific Pilotage Authority (PPA)	45,067	45,666	(599)
Total Pilotage Authorities	**126,660**	**131,753**	**(5,093)**

Source: Pilotage Authorities' draft Annual Reports

In 2004, the LPA, GLPA and PPA each experienced a deficit. This resulted in a combined loss for the four pilotage authorities of just over $5 million, following a positive balance in 2003. The LPA suffered a loss due to an unfavourable service contract awarded by an arbitrator. The GLPA also lost money due to traffic reduction and the unfavourable rate of exchange between the Canadian and U.S. dollars. The PPA late tariff implementation resulted in a $599,000 shortfall. The APA maintained a net income for the third year in a row. Table 8-6 shows the financial results for the four pilotage authorities in 2004.

Based on the average number of assignments per pilot, the efficiency of pilotage services generally increased between 2003 and 2004. The variations between the authorities and from year to year are related to traffic levels. Assignments for the APA, LPA and PPA have increased, but have decreased for the GLPA. Overall, there were slightly more assignments in 2004 than in 2003.

Table 8-7 shows the number of assignments for each pilotage authority and the total for all pilotage authorities in 2004. For information on other years, see Table A8-8 in the Addendum.

TABLE 8-7: TOTAL PILOTAGE ASSIGNMENTS AND ASSIGNMENTS PER PILOT, 2004

Pilotage Authority	*Indicators*	*2004*
Atlantic (APA)	Pilots	54
	Total Assignments	11,848
	Assignments Per Pilot	219
Laurentian (LPA)	Pilots	170
	Total Assignments	20,439
	Assignments Per Pilot	120
Great Lakes (GLPA)	Pilots	62
	Total Assignments	6,628
	Assignments Per Pilot	107
Pacific (PPA)	Pilots	110
	Total Assignments	13,002
	Assignments Per Pilot	110
Total All Authorities	**Pilots**	**396**
	Total Assignments	**51,917**
	Assignments Per Pilot	**131**

Source: Pilotage Authorities' 2004 draft annual reports

Canadian Coast Guard

The Canadian Coast Guard (CCG) is an integral part of the Department of Fisheries and Oceans. The CCG ensures the safe and environmentally responsible use of Canada's waters. It does so through six major sub-activities: aids and waterways services; marine communications and traffic services; icebreaking services; search and rescue services; environmental response services; and fleet services. These sub-activities encompass a variety of marine programs and services. They also benefit a broad cross-section of marine clients, including commercial shipping interests, recreational boaters, the fishing industry, and provincial, municipal and territorial governments, as well as other federal government departments and marine associations.

The CCG's Aids and Waterways Services (AWS) provides safe, efficient and accessible waterways through the operation and maintenance of a system of navigational aids for mariners. It also provides waterway development and maintenance services to ensure safe and environmentally compliant channels for commercial navigation.

All Marine Communications and Traffic Services (MCTS) functions are based on regulations pursuant mainly to the Canada Shipping Act and the Safety of Life at Sea Convention. MCTS provides distress and safety communications and coordination; screens vessels to prevent unsafe vessels from entering Canadian waters; regulates vessel traffic movements; and manages an integrated system of marine information and public correspondence services. Along with ensuring safe marine navigation, MCTS also supports economic activities by optimizing traffic movements and port efficiency, and facilitating industry ship–shore communications.

Under its MCTS functions, the Coast Guard has developed installation strategies for an Automatic Identification System (AIS). This leading-edge marine navigation technology allows the Coast Guard to identify and track vessels approaching and operating in Canadian waters in "near real-time."

Following the events of September 11, 2001, the Canadian and U.S. coast guards established an advance notification requirement for vessels entering Canadian/American waters. This allows both countries to enhance public safety, security and the uninterrupted flow of commerce. Vessels over 300 gross tonnage inbound to Canadian waters must file an Offshore Advance Report with Canadian authorities 96 hours before entering Canadian waters from seaward.

The Icebreaking Services provides icebreaking operations, including route assistance, flood control, harbour breakouts, Northern resupply and, with the presence of icebreakers in the North, maintenance of Canada's sovereignty. The Icebreaking Services also offers ice-routing and information services such as ice reconnaissance and an ice operations centre for tasking icebreakers and ice routing advice. All of these activities are for marine traffic navigating through or around ice-covered waters and for the general public. Under its icebreaking activities, the CCG provides a wide range of client-focused, demand-driven services under which commercial users pay a percentage of allocated costs in the form of an icebreaking service fee.

The Search and Rescue Services (SAR) provides a search and rescue function to save and protect lives in the maritime environment within the Canadian SAR area of responsibility. A SAR service is defined as the performance of distress monitoring, communication, coordination, and search and rescue activities through the use of public and private resources.

The Environmental Response Services (ER) protects the marine environment and related interests through preparedness and monitoring and by responding to marine pollution incidents in waters under Canadian jurisdiction. The Coast Guard serves the general public through its role in preserving ecosystems, ensuring that water supplies remain unpolluted by oil and chemical spills, and protecting recreational resources.

In 2004, the focus was on the creation of the Canadian Coast Guard as a Special Operating Agency (SOA). Although effective as of December 12, 2003, the steps to implement the change needed to be defined and a framework document developed and approved by Treasury Board. The change was implemented on April 1, 2005. In addition, the transfer of responsibilities for marine safety and security policies to Transport Canada, achieved through an Order in Council, had a significant impact on how the Coast Guard was to conduct its remaining services.

Another of the Coast Guard's functions is to acquire, maintain and schedule Fisheries and Oceans Canada's (DFO) fleet and the equipment needed for delivering core marine services to Canadians. This includes dealing with such matters as fleet operational requirements and planning; vessel resource allocation; resource utilization and redeployment; fleet management support; related management information systems; vessel crewing; fleet performance management and costing systems; and management roles and accountabilities. Physical assets of the Canadian Coast Guard are valued at approximately $5 billion. The CCG Technical Program will ensure that these assets are capable, reliable and available to carry out the Coast Guard's vision and mission.

Over the past several years, the CCG has introduced three commercial user fees: the marine navigation service fee, in June 1996; the transit-based icebreaking services fee, in 1998; and the maintenance dredging services tonnage fee, in September 1997. For more information on the CCG functions, visit www.ccg-gcc.gc.ca.

Financial Profile

Table 8-8 shows the Coast Guard's financial results for the previous four fiscal years. Results for 2004/05 reflect forecast expenditures to fiscal year-end and will not be finalized until the end of the fiscal year.

In compliance with the Government of Canada's cost recovery policy, the Coast Guard began several years ago to recover part of the costs it incurs in providing services to industry.

- In June 1996, the CCG introduced the Marine Navigation Services Fee, which was targeted to collect $27.7 million annually, including administrative costs.
- In 1998, the CCG introduced a transit-based Icebreaking Services Fee, which was targeted to collect $13.8 million annually, including administrative costs.
- The Maintenance Dredging Services Tonnage Fee, established in September 1997, was originally intended as an interim measure to cover the full costs incurred by the CCG in providing maintenance dredging services in the St. Lawrence Ship Channel. The Coast Guard continues to work with representatives from the commercial marine transportation industry to arrive at a long-term arrangement, inducing the transfer of responsibilities to industry for these dredging services.

Table 8-9 shows the Coast Guard's revenues and expenditures by its main sub-activities for fiscal year 2004/05. Both revenues and expenditures are forecasts only and will not be finalized until the end of the fiscal year.

TABLE 8-8: CANADIAN COAST GUARD REVENUES AND EXPENDITURES, 2001/02 – 2004/05

(Millions of dollars)

	2001/02	*2002/03*	*2003/04*[1]	*2004/05*[2]
Revenue	35.5	37.0	37.4	39.0
Gross Expenditures	475.3	498.0	504.5	510.0
Net Expenditures	**439.8**	**461.0**	**467.1**	**471.0**

1. Figures are significantly different from last year's Annual Report because last year's forecast included expenditures later allocated to Science & C&P for the public accounts. An estimate of this allocation for 2004/2005 has been removed from the Coast Guard's Period 9 gross forecast. Present figures do not include the Coast Guard College.
2. Figures include amounts related to the Coast Guard College, which was transferred to the Coast Guard as of April 1, 2004.

Source: Department of Fisheries and Oceans

St. Lawrence Seaway

The St. Lawrence Seaway is a unique inland waterway that extends into the industrial heartland of North America and serves 15 major international ports and some 50 regional ports on both sides of the Canada–United States border.

TABLE 8-9: CANADIAN COAST GUARD PLANNED REVENUE AND EXPENDITURES, 2004/05

(Millions of dollars)

	AWS	*MCTS*	*ICE*	*SAR*	*ER*	*College*	*Fleet*
Revenues	29.2	0.2	13.8	0.2	0	3.7	0
Gross Expenditures	116.3	92.9	58.0	95.3	11.4	8.1	154.6
Net Planned Spending	**87.1**	**92.7**	**44.2**	**95.1**	**11.4**	**4.4**	**154.6**

Note: AWS: Aids and Waterways Services; MCTS: Marine Communication and Traffic Services; ICE: Icebreaking Services; SAR: Search and Rescue Services; ER: Environmental Response Services; Fleet: Fleet Management Services.

Source: Fisheries and Oceans Canada

The Seaway includes two main sections: the Montreal–Lake Ontario (MLO) section and the Welland Canal section. The MLO section runs from Montreal to Lake Ontario and encompasses seven locks over 300 kilometres, five in Canada and two in the United States. The Welland Canal section joins Lake Ontario to Lake Erie and contains eight locks over 42 kilometres, all in Canada.

The locks, and the channels that connect them, accommodate vessels up to 225.5 metres long, 23.8 metres wide and 8 metres in draft. Combined, these 15 locks gradually raise vessels 183.2 metres above sea level, the height of a 60-storey building.

The St. Lawrence Seaway Management Corporation (SLSMC) is responsible for managing, operating and maintaining the navigational aspects of the Canadian portion of the Seaway. The SLSMC was established as a not-for-profit corporation by Seaway users and other interested parties. It assumed management of the Canadian Seaway on October 1, 1998, under a long-term agreement with the federal government pursuant to the Canada Marine Act. The SLSMC is authorized to charge tolls and generate other revenues to finance the operation and maintenance of the Seaway and to recover additional funds from the federal government to eliminate operating deficits when required.

The year 2004 marked the 46th shipping season for the Seaway and the seventh full year of management by the SLSMC. During the 2004 season, estimated combined traffic on the two sections of the Seaway was approximately 43.5 million tonnes, 5.3 per cent higher than in 2003. At 10.5 million tonnes, iron ore was again the main commodity shipped, despite dropping two per cent from 2003. Grain also experienced a slight drop (3.4 per cent) in volume carried, at 9.3 million tonnes. Significant gains were made in the movement of general cargo, principally iron and steel, and in other bulk cargo associated with the steel industry, such as coke and iron ore. Benefitting from the strength of the steel industry at home and the need for imported steel from abroad, overall volumes of general cargo totalled 4.3 million tonnes, up 67 per cent, while other bulk cargo totalled 15.2 million tonnes, up 9.4 per cent. Tables 8-10 and 8-11 show cargo movements and traffic by commodity, respectively, for 2003 and 2004. For a longer time series, see tables A8-9 and A8-10 in the Addendum.

Rates and Tariffs

The SLSMC implemented a two per cent cargo toll and ship charge increase for the 2004 navigation season in both sections of the Canadian Seaway. This increase is in accordance with the management agreement between the SLSMC and the federal government, which stipulates annual tariff increases based on the lesser of the annual average percentage change in the Consumer Price Index or two per cent.

TABLE 8-10: ST. LAWRENCE SEAWAY CARGO MOVEMENTS, 2003 AND 2004

(Thousands of tonnes)

Year	*Montreal–Lake Ontario Section*	*Welland Canal Section*
2003	28,900	31,870
2004[1]	30,801	34,285

1 2004 figures are estimated.

Source: St. Lawrence Seaway Management Corporation

TABLE 8-11: ST. LAWRENCE SEAWAY TRAFFIC BY COMMODITY, 2003 AND 2004

(Thousands of tonnes)

Year	*Grain*	*Iron Ore*	*General Cargo*	*Coal*	*Other*	*Total*
2003	9,646	10,649	2,546	4,196	13,788	**40,848**
2004[1]	9,322	10,459	4,252	4,230	15,203	**43,482**

Note: Combined traffic in the two sections of the Seaway.
1 2004 figures are estimated.

Source: St. Lawrence Seaway Management Corporation

Financial Profile

In fiscal year 2003/04[1] Seaway revenues from tolls and other sources totalled $66.6 million, down slightly from $66.8 million in 2002/03. Toll revenues fell 1.3 per cent to $62.7 million, from $63.5 million in 2002/03, reflecting reduced tonnage in steel and steel slab imports into North America.

Seaway operating expenses for 2003/04, related to the management and operation of the Seaway infrastructure, totalled $59.2 million, up from $58.4 million the previous fiscal year. Salaries, wages and benefits accounted for the major part of this total. Expenditures for the asset renewal program, representing the cost of maintenance and major repairs of lock, canals, bridges, buildings and other infrastructure assets, totalled $24.3 million, up from $22.9 million the previous fiscal year.

Table 8-12 shows the financial performance of the St. Lawrence Seaway from 2001/02 to 2003/04.

1 Tolls in fiscal year 2003/04 are for traffic in the 2003 navigation season.

TABLE 8-12: ST. LAWRENCE SEAWAY FINANCIAL PERFORMANCE, 2001/02 TO 2003/04

(Thousands of dollars)

Year[1]	Revenues	Expenditures	Excess of Revenues Over Expenses	Net Excess of Revenues Over Expenses[2]
2001/02	65,730	79,120	(13,390)	(2,646)
2002/03	66,815	84,394	(17,579)	(4,015)
2003/04	66,555	86,247	(19,692)	(3,087)

1. April 1 to March 31.
2. Following contributions from Capital Trust Fund.

Source: St. Lawrence Seaway Management Corporation

INDUSTRY STRUCTURE

Canada's marine industry includes a fleet of Canadian-flag operators that provide domestic and transborder shipping services. International trades are served largely by foreign-flag operators that call at Canada's major ports.

Domestic Services

The Canadian merchant fleet carried the majority of domestic shipments of bulk materials on the Great Lakes and along Canada's coastline. The fleet is defined here as self-propelled vessels of at least 1000 gross tons[2] flying the Canadian flag. By the end of 2004, it included 174 vessels and 2.1 million gross tons.

Although declining in number, dry bulk carriers remain the backbone of the Canadian merchant fleet, accounting for 53 per cent of tonnage and 35 per cent of vessels in 2004. The dry bulk fleet was made up of 61 vessels in 2004, including straight-deck bulkers dedicated mainly to grain transportation, and self-unloading vessels carrying various bulk commodities. By comparison, while the number of tankers decreased from 39 in 1984 to 20 in 2004, their capacity share increased from 11 to 20 per cent of total gross tonnage, due to the addition of larger units. In last 20 years, the capacity of ferries vessels also increased (from 10 to 18 per cent of total gross tonnage).

An extensive fleet of tugs and barges was also in operation at the domestic and international level. In 2004, the Canadian Transportation Agency estimated that the Canadian fleet of tugs and barges included 322 tugs (126,000 gross tons) and around 500 active barges and scows (600,000 gross tons). Approximately seven per cent of the tug population had tonnage greater than 1000 gross tons and were used in offshore supply.

Table 8-13 shows the transport capacity of the Canadian-registered fleet by type of vessel in 1984, 1994 and 2004.

TABLE 8-13: CANADIAN-REGISTERED FLEET BY TYPE, 1984, 1994 AND 2004

	Gross Tons (Thousands of tons)			Number of Vessels		
Type of Carriers	1984	1994	2004	1984	1994	2004
Dry bulk	1,898	1,351	1,135	118	76	61
Tankers	279	205	429	39	31	20
General cargo	102	77	132	23	13	22
Ferries	262	346	385	55	61	64
Other	101	33	40	8	7	7
Total	**2,642**	**2,013**	**2,122**	**243**	**188**	**174**

Note: Self-propelled vessels of 1,000 gross tons and over, including government owned ferries, excluding tugs used in offshore supply.

Source: Canadian Transportation Agency and Transport Canada

Eastern Canada

Freight services in eastern Canada, including the Arctic, are provided by a fleet of dry bulk vessels (straight-deck and self-unloaders), tankers, general cargo and other vessels. Algoma Central Corporation, Upper Lakes Group and Canada Steamship Lines are the three largest operators in the Great Lakes-St. Lawrence region.

There were no acquisitions or mergers among Great Lakes ship operators in 2004. However, a memorandum of cooperation between Algoma Central Corporation and Upper Lakes Group took effect on January 2, 2004. The new arrangement increases the scope of their Seaway Marine Transport (SMT) partnership by integrating the marketing, vessel traffic and administrative functions provided by SMT with the vessel management, purchasing, accounting and administrative functions of the respective fleets. SMT's scope of business also expanded to include water transportation services for all non-liquid cargo trades in the Great Lakes–St. Lawrence Waterway and Eastern Coast of Canada, including the Arctic. Highlighting this expanded scope, SMT entered into agreements with the acquisition of an equity interest in a U.S. corporation that acquired tug and barge assets in March 2004.

Western Canada

Domestic marine cargo services on the west coast are provided by a large tug and barge fleet. Most operators are involved mainly in the domestic trades but some also trade internationally between Canadian and U.S. ports.

2 Gross tonnage is the capacity in cubic feet of the spaces within the hull and of the enclosed spaces above the deck of a vessel, divided by 100. Thus 100 cubic feet of capacity is equivalent to one gross ton. However, capacity of a cargo carrying ship can also be expressed as deadweight tonnes (1000 kg) required to immerse the hull at a particular draught (usually the maximum summer draught).

Washington Marine Group controls several of the largest tug and barge operations, including: Seaspan International Ltd., the largest Canadian tug and barge operator on the west coast; Cates Tugs; Norsk; and Kingcome Navigation Company, formerly owned by MacMillan Bloedel. Rivtow Marine Ltd. is the second-ranked tugboat company in British Columbia.

Northern Canada

In the Western Arctic, Northern Transportation Company Limited (NTCL) is the main marine operator for the Mackenzie River Watershed (including the Mackenzie River and Great Slave Lake), the Arctic coast and islands, and Alaska. Utilizing a fleet of tugs and dual-purpose barges, NTCL's principal concerns are bulk petroleum products and dry cargo for communities, defence installations, and oil and gas exploration sites across the North.

Formerly the purview of the Canadian Coast Guard, responsibility for the Eastern Arctic Sealift for dry cargo and bulk fuel was transferred to the Government of Nunavut at the beginning of 2001. Under the new arrangement, all Government of Nunavut departments, corporations, agencies and contractors must use the contracted carrier. As well, all other shippers requiring this service may ship under the same terms and conditions of the contract.

With multi-year contracts to 2006, dry cargo sealift for the Eastern Arctic continued to be supplied by Nunavut Sealink and Supply Inc. (NSSI) and Nunavut Eastern Arctic Shipping (NEAS) during the 2004 season. NSSI is a partnership between Transport Desgagnes and Arctic Cooperatives Ltd. that served the seven Kivalliq communities plus four Baffin Island communities. NEAS served the remaining 10 Baffin Island communities. The cargo was shipped from Montreal.

Also with multi-year contracts to 2005, the Woodward Group and NTCL continued to provide for the delivery of bulk fuel to the region. Utilizing two tankers travelling from Montreal and Churchill, the Woodward Group serviced the Baffin and Kivalliq regions in 2004. NTCL served the Kitikmeot region.

In addition to the Arctic Sealift for Nunavut communities, re-supply services to the Nunavik region are managed by the Quebec Ministry of Transportation. The James and Hudson Bay Cree are served out of Moosonee, with cargo originating in the Toronto region.

In 2004, Gardewine North, Hudson Bay Railway, The Port of Churchill and Moosonee Transportation Limited formed an alliance to provide sealift transportation to Kivalliq. Moosonee Transport, located in James Bay, leased two barges from NTCL to re-supply seven Kivalliq communities with dry cargo in the July–August time frame. Shippers were offered one single thru-rate for freight that encompasses a combination of truck, rail and marine transportation modes from either Thompson or Winnipeg (in Manitoba) to the Kivalliq Region in Nunavut. Moosonee completed eight sailings carrying approximately 5,000 tonnes of cargo.

Mining operations in the Arctic regions also have vessels calling with supplies inbound and carrying zinc and lead concentrates to world markets outbound.

International Services

International marine freight transport includes bulk shipping and liner shipping. Bulk shipping is the transport of large volumes of homogeneous cargo, often in shiploads. Examples of Canadian bulk cargoes include coal, iron ore, grain and potash.

Bulk shipping services are provided under time charters (short-term and long-term contracts) and short-term "spot" or "tramp" contracts generally for a specified number of voyages or days or for a given quantity of cargo. The bulk shipping industry operates in a competitive market. Most of Canada's international bulk trade is carried under time charter arrangements on foreign-flagged ships.

Liner shipping is the transport of many individual consignments of cargo at fixed prices for each commodity on ships that operate regularly among ports of call on a scheduled basis. The cargo is often carried in standardized containers that can easily be transferred to trains or trucks for transport away from the port. Liner shipping is dominated by large fleets of specialized container vessels operating on major trade routes around the world.

Shipping lines calling at Canadian ports may provide liner services independently or as members of shipping conferences that adhere to rates and/or conditions of service under a conference agreement. Such practices are exempted from certain provisions of the *Competition Act* by the *Shipping Conferences Exemption Act* (SCEA), which was amended in 2002.

By offering rates and services comparable with those of conference operators, independent shipping lines (also called non-conference carriers) contribute to a competitive international shipping industry. Shipping lines sometimes choose to be a conference member on certain routes and an independent operator on others.

Most of the Canadian-controlled international fleet operates under foreign flags and employs foreign officers and crews.

Services Available to Canadian Shippers

In 2004, the Canadian Transportation Agency had 15 shipping conference agreements on file. Conferences are no longer required to file their tariffs with the Agency.

Five of the conferences operate between Eastern Canada, Northern Europe and the Mediterranean. Major lines serving Canada as conference members include Atlantic Container Line, Canada Maritime Ltd., Hapag-Lloyd Container Line, P&O Nedlloyd, Mitsui O.S.K. Lines and Orient Overseas Container Lines.

Table 8-14 lists the 15 Conference Agreements on file with the Canadian Transportation Agency.

TABLE 8-14: SHIPPING CONFERENCES SERVING CANADA IN 2004

1. Canadian Continental Eastbound Freight Conference (E)
2. Canada–United Kingdom Freight Conference (E)
3. Continental Canadian Westbound Freight Conference (E)
4. Australia–Canada Container Line Association (E & W)
5. Mediterranean Canadian Freight Conference (E)
6. Canada/Australia–New Zealand Association Carriers (CANZAC) (E & W)
7. New Zealand–Canada Container Lines Association (E & W)
8. Canada Transpacific Stabilization Agreement (E & W)
9. Mediterranean North Pacific Coast Freight Conference (Canada) (W)
10. Canada/Australia–New Zealand Discussion Agreement (E & W)
11. Canada North Atlantic Westbound Freight Conference (E)
12. Canada Westbound Transpacific Stabilization Agreement (E)
13. Joint Mediterranean Canada Service Agreement (E)
14. Canadian Pacific/Latin American Freight Service (W)
15. Columbus/Maruba Working Agreement (W)

Notes: E = East Coast, W = West Coast

Source: Canadian Transportation Agency

Shippers benefit from competition between conference and non-conference carriers as well as from competition within conferences, due to provisions on independent action under the SCEA. These provisions allow individual conference members to offer rates or services that differ from those found in the conference agreement. Under the 2002 SCEA amendments, conference members now have to give five days' advance notice, instead of fifteen, to other conference members if it intends to take independent action.

The 2002 SCEA amendments also allow a conference member to sign service contracts with shippers without having to disclose the contract terms and conditions to other conference members. It further allows a conference and a shipper to negotiate and sign confidential, conference-wide service contracts. These contracts must, however, be filed with the Canadian Transportation Agency in order to comply with the SCEA.

In 2004, the Canadian Transportation Agency accepted filings for 15 service contracts,[3] down from 25 in 2003 and 51 in 2002. The contracts applied to both inbound and outbound traffic and to origins and destinations on both the east and west coasts of Canada.

PASSENGER TRANSPORTATION

Ferry Services

Most major ferry operators in Canada belong to the Canadian Ferry Operators Association (CFOA). However, Canada's ferry services are marked by wide differences in services, ownership and vessel type used. Owners range from small, private operators to provincial governments and federal Crown corporations. Terminals and docking facilities are also owned, leased and operated by ferry companies, municipalities, private companies and federal and provincial governments. Vessel types vary from small cable ferries to large cruise-type vessels and fast ferries. Operations range from seasonal to year-round service.

For details on the major ferry services, see Addendum Table A8-11. In addition, most major ferry services have their own Web sites, routes and rates.

Traffic figures for 2004 for all members of the CFOA are not yet available. However, the 2003 traffic figures give a good indication of the relative size of CFOA operations. An estimated 38.8 million passengers and 16.3 million vehicles used Canadian ferry services. The British Columbia Ferry Services Inc. is by far Canada's largest operator, carrying 21.4 million passengers and 8.3 million vehicles in 2003. British Columbia's Ministry of Transportation and Highways and Fraser River Marine Transportation also operate inland ferry services; they carried another 7.2 million passengers and 3.3 million vehicles in 2003. In Quebec, La Société des Traversiers du Québec carried 5.2 million passengers and 2.6 million vehicles.

3 Service contracts are pro-competitive provisions designed to maintain Canadian conference legislation in balance with Canada's major trading partners and support the recent trend toward a greater reliance on the marketplace.

In 2004, Marine Atlantic Inc., a federal Crown corporation, carried 419,548 passengers and 223,044 vehicles between Newfoundland and Labrador and Nova Scotia. Private ferry operators subsidized by the federal government carried fewer passengers and vehicles in 2003, approximately 930,000 passengers and 317,000 vehicles. The remaining CFOA members, including provincial operators in Newfoundland and Labrador, Manitoba, Ontario and New Brunswick, accounted for approximately three million passengers and 1.3 million vehicle crossings.

In Atlantic Canada, federally supported ferry services are now limited to those provided by Marine Atlantic Inc. and two private-sector operators, Northumberland Ferries Ltd. and C.T.M.A. Traversier Ltée. The federal government also provides an annual grant to British Columbia that is directed to BC Ferries.

Cruise Ship Industry

Ownership of large cruise vessels calling at Canada's ports rests with foreign-based companies. Flying foreign flags, these vessels offer two basic types of extended cruises: the luxury cruise and the "pocket" cruise, distinguished by vessel capacity of typically less than 150 passengers.

After the Caribbean and the Mediterranean, Alaska cruises through British Columbia's scenic Inside Passage are the third most popular in the world. For these voyages, Vancouver and, increasingly, Seattle serve as "home ports," where passengers embark and/or disembark. In 2004, Vancouver experienced a 2.5 per cent decline in cruise traffic from 2003 to 929,976 passengers. This decline was attributable mainly to the Port of Seattle's ability to attract cruise ships by opening new facilities, and the impact of world events on travel and tourism.

In eastern Canada, luxury cruise vessels regularly depart New York and, travelling up the eastern seaboard, call in at Halifax, Charlottetown and other east coast ports before entering the St. Lawrence River and heading to Quebec City and Montreal. Shorter cruises also sail out of New York or Boston for Halifax, Saint John and other Atlantic ports. Many ports, including Saint John, have been investing in new facilities to serve cruise passengers.

Other Canadian ports also benefit from calls by cruise lines, including Victoria, St. John's, Newfoundland and Sydney, Nova Scotia.

Table 8-15 shows international cruise ship traffic at major Canadian ports in 2003 and 2004. Addendum Table A8-12 gives a longer time series.

TABLE 8-15: INTERNATIONAL CRUISE SHIP TRAFFIC AT MAJOR CANADIAN PORTS, 2003 AND 2004

(Passengers)

Year	Vancouver	Montreal	Quebec City	Halifax	Saint John
2003	953,376	33,600	59,000	170,425	83,946
2004 (prel.)	929,976	40,000	62,000	212,000	138,622

Source: Canada Port Authorities

FREIGHT TRANSPORTATION

In 2003, marine freight traffic totalled 375 million tonnes[4], up 8.6 per cent from 2002. Domestic flows[5] accounted for more than one fifth of this (68.3 million tonnes), up 9 per cent from the year before (62.6 million tonnes). Canadian-flag vessels carried 95.9 per cent (65.5 million tonnes) of domestic flows. In 2003, Canada–U.S. traffic totalled 123.5 million tonnes, up 8.0 per cent from 2002. Of this, Canadian-flag vessels carried 51.8 million tonnes, or about 42 per cent of the total. "Other" international (deep-sea or overseas) traffic[6] increased by 8.8 per cent in 2003 to 183 million tonnes. Canadian-flag vessels carried only 0.1 per cent of this traffic.

Table 8-16 shows Canada's 2002 and 2003 marine traffic statistics by sector. Addendum Table A8-13 covers the same information from 1986 to 2003.

TABLE 8-16: CANADA'S MARINE TRAFFIC STATISTICS BY SECTOR, 2002 AND 2003

(Millions of tonnes)

	Flows			Total Flows	Total Handled
	Domestic	Transborder	Overseas		
2002	62.6	114.3	168.4	345.4	408.1
2003	68.3	123.5	183.2	374.9	443.0

Source: Statistics Canada, Shipping in Canada, Cat. 54-205

4 Based on traffic flows rather than tonnage handled at Canadian ports (domestic volumes are not double counted).

5 Maritime traffic that originates from and is destined for a Canadian port. Flows count traffic volume only once, in contrast to port loadings and unloadings, for which, in the case of domestic traffic, the volumes get counted twice.

6 "Other" international traffic includes shipments to and from foreign countries other than the United States.

Table 8-17 shows the share of Canadian waterborne trade carried by Canadian-flag vessels in 2003.

TABLE 8-17: CANADIAN-FLAG SHARE OF CANADIAN WATERBORNE TRADE, 2003

(Millions of tonnes)

Canadian Waterborne Trade	Canadian Flag	Per cent	U.S. Flag	Per cent	Foreign Flag	Per cent	Total Traffic
Domestic	65.5	95.9	0.0	0.1	2.8	4.1	68.3
Canada/U.S.	51.8	42.0	13.6	11.0	58.0	47.0	123.5
Deep-Sea	0.2	0.1	0.6	0.3	182.4	99.6	183.2
Total	**117.6**	**31.4**	**14.2**	**3.8**	**243.2**	**64.9**	**374.9**

Source: Statistics Canada and Transport Canada

Table 8-18 shows the actual tonnage and percentage of total domestic cargo tonnage carried by foreign-registered vessels in 2001, 2002 and 2003. Table A8-14 in the Addendum gives this same information over a longer time period.

TABLE 8-18: SHARE OF TONNAGE CARRIED BY FOREIGN-FLAG SHIPS IN THE CANADIAN COASTING TRADE, 2001 – 2003

Year	Canadian	Per cent	Foreign	Per cent	Total
2001	52,803,710	98.0	1,099,099	2.0	53,902,809
2002[1]	59,823,994	95.5	2,802,296	4.5	62,626,289
2003[1]	65,468,886	95.9	2,827,887	4.1	68,296,773

1. Significant increase of "Crude Petroleum Oils" shipments from Grand Bank (Hibernia) & Come-By-Chance by foreign-flag ships.

Source: Transport Canada, from data supplied by Statistics Canada

DOMESTIC MARINE FREIGHT TRAFFIC

COASTING TRADE ACTIVITY FOR 2004

Under Canada's *Coasting Trade Act*, only Canadian-registered, duty-paid ships may transport passengers and cargoes, and conduct commercial marine-related activities in Canadian waters. In addition, only Canadian-registered, duty-paid ships may be involved in the exploration and exploitation of non-living natural resources on Canada's continental shelf. If, however, no Canadian ship is available or capable of providing a particular service, foreign-registered ships can then apply to the Canada Border Services Agency (CBSA) for licences to enter Canada's coasting trade. The CBSA role was formerly handled by Canada Customs and Revenue Agency (CCRA).

In 2004, CBSA received 128 applications for a coasting trade licence, approximately 20 per cent more than in 2003. Of these, 67 were for the carriage of goods, 48 were for a commercial activity and 13 were for the transportation of passengers. U.S. vessels were the most predominant foreign flag involved in Canada's coasting trade, with 46 requests. Bahamian vessels were next most frequent, with 28 requests (after having been first in 2003 for the first time since the *Coasting Trade Act* came into force in December 1992). Panama and Norway were third and fourth, respectively.

The highest percentage of activity continued to be for vessels associated with the oil and gas exploration and production industry. In 2004, there were 62 tanker requests, 14 for drill ships, rigs and support vessels, and 10 for seismic vessels. Much of the tanker traffic relates to the requirement for large-capacity shuttle tankers.

As it is both loaded and unloaded at Canadian ports, domestic cargo is handled twice within the Canadian port system. In 2003, domestic cargo handled increased to 136.4 million tonnes, up 8.7 per cent from the previous year. A significant growth in shipments of crude petroleum, pulpwood and chips, wheat, and fuel oils offset decreased shipments of iron ore, logs and other wood, stone, sand and gravel.

Table 8-19 shows flows of domestic marine traffic by region in 2003.

TABLE 8-19: MARINE DOMESTIC FLOWS BY CANADIAN REGION, 2003

(Thousands of tonnes)

Region of Origin (Loadings)	Region of Destination (Unloadings) Atlantic	St. Lawrence	Great Lakes	Pacific	All Regions
Atlantic	22,908	3,458	552	7	26,925
St. Lawrence	928	5,369	5,559	3	11,859
Great Lakes	242	5,140	8,196	0	13,579
Pacific	3	0	0	15,931	15,934
All Regions	**24,082**	**13,967**	**14,307**	**15,941**	**68,297**

Source: Statistics Canada, Shipping in Canada, Cat. 54-205

Most domestic traffic passes through the Great Lakes–St. Lawrence Seaway system. In 2003, the ports serving the Seaway handled 39.2 per cent of the total domestic tonnage (loadings and unloadings), or 53.5 million tonnes. Pacific region ports handled 23.4 per cent of the total (31.9 million tonnes). Pacific ports handled 0.3 million tonnes more domestic cargo in 2003 than in 2002; 99.97 per cent of this originated and terminated within that region. Atlantic region ports handled 51.0 million tonnes, up 24 per cent.

The primary commodities handled in the domestic trade across Canada in 2003 include:

- crude petroleum (40.1 million tonnes, up 30.4 per cent from 2002)
- pulpwood and chips (15.8 million tonnes, up 6.8 per cent)
- stone, limestone, sand and gravel (12.9 million tonnes, down 1.1 per cent)
- iron ore and concentrates (10.5 million tonnes, down 7.9 per cent)
- logs and other wood (7.7 million tonnes, down 7.2 per cent)
- fuel oil (8.4 million tonnes, up 15.1 per cent)
- wheat (8.4 million tonnes, up 21.7 per cent)

Together, these commodities represent 76 per cent of all domestic tonnage handled at Canadian ports in 2003.

International Marine Freight Traffic

In 2003, Canadian ports handled 306.6 million tonnes of international cargo, up 8.4 per cent from the year before. Of this, 62.4 per cent was export-oriented (including in-transit and re-export traffic). Japan, China, South Korea, the United Kingdom and other Western European nations accounted for about 60 per cent of Canada's total international (excluding U.S.) marine traffic (exports and imports).

Conference/Non-Conference Market Shares

In recent years, non-conference traffic has seen consistent growth both in absolute terms and as a percentage of total liner traffic. In 2003, it increased to 22.2 million tonnes. On the other hand, conference traffic fell to 9.8 million tonnes. This means that non-conference operators moved almost 70 per cent of total liner traffic. Non-conference share of liner traffic becomes even more dominant when non-conference U.S. origin/destination transshipped traffic is considered.[7]

Table 8-20 compares the conference and non-conference shares of Canadian liner trade between 2002 and 2003. Addendum Table A8-15 shows the same data from 1995.

TABLE 8-20: CONFERENCE/NON-CONFERENCE SHARES OF CANADIAN LINER TRADE, 2002 – 2003

(Millions of tonnes)

	2002	2003
Conference		
Exports	3.5	3.4
Imports	7.3	6.4
Total	**10.8**	**9.8**
Non-conference		
Exports	12.7	14.9
Imports	5.4	7.3
Total	**18.1**	**22.2**

Source: *Transport Canada, International Database, Statistics Canada*

In terms of type of cargo, conference operators have been concentrating almost exclusively on containerized traffic in recent years. The year 2003 was no exception, as 97 per cent (9.5 million of 9.8 million tonnes) of cargo was carried in containers. Non-conference operators are also more and more moving cargo in containers (18.4 million tonnes in 2003), although this includes general cargo and neobulk traffic as well.

Breaking down liner traffic by foreign region of origin/destination shows the relative shares of conference and non-conference operators on different routes. Table 8-21 compares conference and non-conference liner traffic by region for 2003.

TABLE 8-21: LINER TRAFFIC BY REGION, 2003

(Millions of tonnes)

	Liner Imports		*Liner Exports*		
Region	*Conference*	*Non-conference*	*Conference*	*Non-conference*	*Total*
Europe	4.1	2.4	3.3	2.3	12.1
Asia	2.3	3.9	–	10.5	16.7
Central America	–	0.2	0.0	0.7	0.9
South America	–	0.2	0.1	0.4	0.7
Other America	–	0.2	–	0.3	0.5
Middle East	0.0	0.2	0.0	0.2	0.5
Oceania	0.0	0.1	0.0	0.2	0.4
Africa	–	0.2	–	0.1	0.2
Total	**6.4**	**7.3**	**3.4**	**14.9**	**32.0**

Note: – means Nil.
Other America = North America plus Greenland and Saint Pierre and Miquelon.

Source: *Transport Canada, International Database, Statistics Canada*

7 It is important to note that the data in the tables are not adjusted for U.S. transshipments moving through Canadian ports. Much of this traffic moves on conference vessels but at non-conference rates. The route most likely affected by these transshipments is the one between Europe and Canada. Montreal estimates that approximately 50 per cent of its liner traffic originates in or is destined for the United States. Halifax and Vancouver are also handling growing amounts of U.S. Midwest traffic. This would, of course, overstate the share of conference traffic.

CANADA–U.S. FREIGHT TRAFFIC

In 2003, Canada's marine traffic to and from the United States totalled 123.5 million tonnes, up by 8.0 per cent. Imports (unloading from U.S. origins)[8] grew by 1.9 per cent, while exports (loadings to U.S. destinations) grew by 11.5 per cent.

Table 8-22 shows Canada's maritime trade with the United States in 2002 and 2003. Addendum Table A8-16 shows the same data from 1986.

TABLE 8-22: CANADA'S MARITIME TRADE WITH THE UNITED STATES, 2002 – 2003

(Millions of tonnes)

	Loaded	*Unloaded*	*Total*
2002	72.9	41.4	114.3
2003	81.2	42.2	123.5

Source: *Statistics Canada, Cat. 54-205, Transport Canada*

Loadings at Canadian ports destined for the United States totalled 81.2 million tonnes in 2003. Seven commodities accounted for 83 per cent of this volume: crude petroleum (21.1 million tonnes); stone, limestone, sand and gravel (11.9 million tonnes); gasoline (8.4 million tonnes); iron ore (8.2 million tonnes); fuel oil (7.9 million tonnes); gypsum (6.1 million tonnes); and salt (4.0 million tonnes).

From 2002 to 2003, significant changes took place in the volumes of major commodities exported to the United States. Volumes of several commodities increased: crude petroleum exports jumped by 39.2 per cent, stone, limestone, sand and gravel by 12.8 per cent, fuel oil by 20.2 per cent, salt by 15.0 per cent and iron ore by 24.6 per cent. Exports of gasoline and gypsum, on the other hand, decreased by 11.1 and 7.5 per cent, respectively.

The Canadian Atlantic to the U.S. Atlantic route and the Canadian Great Lakes to the U.S. Great Lakes route were two main flow corridors used in 2003. Of total loadings to the United States, 57 per cent (46.0 million tonnes) was shipped by the Atlantic route, while 17 per cent (14.2 million tonnes) was shipped by the Great Lakes route. Combined, these routes accounted for 74 per cent of Canada's commodities traffic volumes to the United States via marine transport services.

Imports of U.S. marine shipments to Canada totalled 42.2 million tonnes in 2003, up 1.9 per cent. Seven commodities accounted for 86 per cent of this volume: coal (18.9 million tonnes); iron ore (5.5 million tonnes); fuel oil (2.8 million tonnes); stone, limestone, sand and gravel (2.7 million tonnes); other petroleum products (2.7 million tonnes); basic chemicals (2.6 million tonnes); and salt (0.9 million tonnes).

As with exports, volumes of commodities imported changed significantly in 2003. Imports of fuel oil and gasoline rose 28.9 and 13.2 per cent, respectively, while shipments of stone, limestone, sand and gravel and basic chemicals dropped by 11.8 and 21.1 per cent, respectively.

More than 73 per cent, by volume, of total marine imports from the United States originated at ports on the Great Lakes. Ports along the U.S. Atlantic and the Gulf of Mexico accounted for 19.2 per cent, while U.S. Pacific ports made up the remaining seven per cent.

Table 8-23 shows traffic flows from Canadian to U.S. ports in 2003, while Table 8-24 shows traffic flows from U.S. to Canadian ports.

TABLE 8-23: CANADA'S MARINE TRAFFIC TO THE UNITED STATES, 2003

(Millions of tonnes)

	U.S. Region of Destination			
Canadian Region of Origin	*U.S. Atlantic*	*U.S. Great Lakes*	*U.S. Pacific*	*Total*
Atlantic	46.0	0.0	0.4	46.4
St. Lawrence	4.8	5.3	0.0	10.2
Great Lakes	0.1	14.2	0.0	14.3
Pacific	0.4	0.0	9.9	10.3
Total	**51.3**	**19.6**	**10.3**	**81.2**

Note: *Table may not add up due to rounding.*

Source: *Statistics Canada, Cat. 54-205, Transport Canada*

TABLE 8-24: CANADA'S MARINE TRAFFIC FROM THE UNITED STATES, 2003

(Millions of tonnes)

	U.S. Region of Origin			
Canadian Region of Destination	*U.S. Atlantic*	*U.S. Great Lakes*	*U.S. Pacific*	*Total*
Atlantic	4.5	0.0	0.1	4.6
St. Lawrence	3.5	2.2	0.2	5.9
Great Lakes	0.1	28.9	0.0	29.0
Pacific	0.0	0.0	2.7	2.7
Total	**8.1**	**31.2**	**3.0**	**42.2**

Note: *Table may not add up due to rounding.*

Source: *Statistics Canada, Cat. 54-205, Transport Canada*

8 Including in-transit and transshipment cargo.

Overseas Freight Traffic

Canada's 2003 marine trade with overseas countries (excluding the United States) totalled 183 million tonnes, up nine per cent from 2002. Exports exceeded imports by about 37 million tonnes. Approximately 59 per cent of overseas exports were loaded at west coast ports, while 88 per cent of overseas imports were unloaded at east coast ports.

Table 8-25 shows Canada's marine overseas trade in 2002 and 2003. Addendum Table A8-17 shows overseas trade since 1986.

TABLE 8-25: CANADA'S MARITIME OVERSEAS TRADE, 2002 – 2003

(Millions of tonnes)

	Loaded	*Unloaded*	*Total*
2002	101.4	67.0	168.4
2003	110.2	73.0	183.2

Note: Table may not add up due to rounding.
Source: Statistics Canada, Cat. 54-205; Transport Canada

In 2003, Canadian ports loaded 110.2 million tonnes of cargo to be shipped to non-U.S. countries, up nine per cent from 2002. The major commodities were: coal (25.5 million tonnes); iron ore (21.7 million tonnes); containerized freight (15.0 million tonnes); wheat (10.7 million tonnes); sulphur (5.6 million tonnes); potash (5.6 million tonnes); and wood pulp (5.0 million tonnes). Slightly more than 13 per cent of this traffic was containerized.

Increasing in 2003 were shipments of coal (6.2 per cent), iron ore (16.6 per cent), wheat (three per cent), sulphur and potash. Shipments of wood pulp, however, decreased by 1.4 per cent.

Of Canada's total marine exports to overseas destinations in 2003, three fifths were loaded at ports in Western Canada. Ports along the St. Lawrence Seaway handled most of the loading for ports in Eastern Canada. Western ports shipped the majority of the tonnage travelling the Asia and Oceania trade routes (69 per cent), while the eastern ports handled 62 per cent of the tonnage shipped to Europe.

In terms of imports, Canadian ports unloaded 73.0 million tonnes of marine shipments from overseas origins in 2003, up 8.9 per cent. Imports of crude petroleum[9] were 33 million tonnes, accounting for 46 per cent of all marine traffic unloaded from offshore origins. The other major commodities unloaded were: containerized freight (12.9 million tonnes); basic chemicals (4.3 million tonnes); other metallic ores and concentrates (3.7 million tonnes); gasoline (3.3 million tonnes); coal (2.6 million tonnes); and iron and steel (2.1 million tonnes). About 18 per cent of this inbound traffic was containerized.

In addition, more than 87 per cent of overseas shipments were unloaded at ports in Eastern Canada. Overseas cargo originated mainly from Europe, the Middle East and Africa.

Table 8-26 shows Canada's marine traffic to overseas destinations, while Table 8-27 shows Canada's marine traffic from overseas markets in 2003.

TABLE 8-26: CANADA'S MARINE TRAFFIC TO OVERSEAS, 2003

(Millions of tonnes)

	Canadian Region of Origin		
Foreign Region of Destination	*Eastern Ports*	*Western Ports*	*Total*
Asia and Oceania	7.6	44.8	52.4
Europe	28.4	8.2	36.6
South and Central America	4.9	7.9	12.8
Middle East and Africa	4.7	3.7	8.4
Unknown	0.0	0.0	0.0
Total	**45.6**	**64.6**	**110.2**

Note: Table may not add up due to rounding.
Source: Statistics Canada, Cat. 54-205; Transport Canada

TABLE 8-27: CANADA'S MARINE TRAFFIC FROM OVERSEAS, 2003

(Millions of tonnes)

	Canadian Region of Destination		
Foreign Region of Origin	*Eastern Ports*	*Western Ports*	*Total*
Europe	27.5	0.2	27.7
Middle East and Africa	21.0	0.0	21.0
South and Central America	12.0	1.1	13.0
Asia and Oceania	3.5	7.6	11.1
Unknown	0.1	0.0	0.1
Total	**64.1**	**8.9**	**73.0**

Note: Table may not add up due to rounding.
Source: Statistics Canada, Cat. 54-205; Transport Canada

9 Including transshipments of North Sea Crude petroleum.

MARINE TRADE

International trade data indicate that Canadian international marine trade in 2003 totalled $107.4 billion (excluding shipments via U.S. ports). This is up 4.1 per cent from 2002. Marine imports totalled $59.8 billion, while marine exports totalled $47.6 billion. The value of imports increased by 4.8 per cent, notably with increased cargoes inbound from China, Japan, South Korea, Germany, the United Kingdom and Norway. The value of exports also increased, by 3.3 per cent, mainly to United States, China and United Kingdom.

Table 8-28 shows the value of the marine share of Canada's international trade in 2003.

TABLE 8-28: VALUE OF MARINE SHARE OF CANADIAN INTERNATIONAL TRADE, 2003

(Billions of Canadian dollars)

	Marine	*All Modes*	*Marine (per cent)*
Transborder			
Exports[1]	12.06	326.70	3.7
Imports	3.15	203.70	1.6
Total U.S.	**15.21**	**530.40**	**2.9**
Other countries			
Exports[1]	35.56	54.17	65.6
Imports	56.63	132.14	42.8
Total	**92.19**	**186.30**	**49.4**

Note: Table may not add up due to rounding.
1. Including domestic exports and re-exports.
Source: Statistics Canada, Cat. 65-202 and 65-203, Special tabulation(s).

Marine traffic with the United States in 2003 totalled $15.2 billion, based mainly on exports of $12.1 billion. Nonetheless, this represented only 2.9 per cent of total Canada–U.S. trade. The bulk of the traffic was handled by surface transport modes, such as trucking and rail.

Canada's marine trade with overseas countries (excluding the United States) totalled $92.2 billion in 2003. Exports accounted for $35.6 billion of this total, while imports accounted for $56.6 billion. In terms of value, marine transport accounted for 49 per cent of all overseas trade and was the dominant mode for shipping overseas freight.

Asia, Western Europe and the United States are the major areas of exports/imports. The principal commodities exported to foreign countries in 2003 (including the United States) were: forest products ($8.7 billion); gasoline/fuel oils ($6.6 billion); and grains ($4.7 billion). Imports consisted of: crude petroleum ($9.4 billion); textiles, leathers and end products ($8.9 billion); automobile vehicles ($7.8 billion); machinery ($5.8 billion); and other food products ($3.2 billion). For more information on the United States and overseas countries and principal commodities exported/imported by value, see Addendum Table A8-18.

AIR TRANSPORTATION 9

Passenger traffic in 2004 was very close to the 2000 peak level.
Air Canada successfully emerged from bankruptcy protection in 2004.

MAJOR EVENTS IN 2004

Air Canada

In 2004, Air Canada continued the restructuring efforts it began after filing for court protection under the *Companies' Creditors Arrangement Act* (CCAA) on April 1, 2003. Over the course of its restructuring, the airline achieved a number of objectives that were critical to its emergence from the CCAA. It significantly reduced its annual operating costs, erased its debt burden, and raised more $1.8 billion in new equity to ensure sufficient liquidity upon exit.

On August 17, 2004, creditors approved Air Canada's Plan of Arrangement (i.e., its restructuring plan) by a near unanimous vote. The Plan received final approval by the Ontario Superior Court of Justice on August 23, 2004. After 18 months of significant restructuring, Air Canada successfully emerged from bankruptcy protection on September 30, 2004, with a revitalized business plan and balance sheet.

Air Liberalization

The Government requested the assistance of the Standing Committee on Transport (SCOT) to conduct a review of whether Canada should further liberalize its approach to the economic regulation of the air industry. On November 4, 2004, a guidance document designed to help the Committee identify the issues that need to be addressed and to provide specific questions for consideration was submitted to the SCOT. The objective is for the Committee to report on the views of stakeholders and the interested public, and identify the priorities and policy principles that should guide Canada's air liberalization efforts over the next ten years. The review is expected to begin in early 2005.

Air Travel Complaints Commissioner

Ms. Liette Lacroix Kenniff was the Air Travel Complaints Commissioner until September 2004, having been re-appointed by the Minister of Transport in September 2003 for an additional one-year term. The Commissioner released two reports in 2004 for the calendar year 2003. The first report covered the first six months of 2003 and cited a decrease in the number of complaints received by the Commissioner's office over the previous six-month period, due partly to lower-than-average air traffic levels. In her second report, covering the final six months of 2003, the Commissioner noted that fewer complaints were made against Air Canada during its bankruptcy protection, thus further reducing the total number of complaints filed. Each of the Commissioner's reports noted that the number of complaints continued to decline.

Airport Rent Policy Review

A review of the rent policy for 21 Airport Authorities in the National Airports System (NAS) was launched in 2001, in response to the demands of airports and aviation communities and to the issues raised by the Auditor General in October 2000. The review is designed to assess whether the federal government's airport rent policy balances the interests of all stakeholders, including the air industry and Canadian taxpayers. It has been conducted at the same time as, but independently of, the development of proposed airport legislation. Efforts were undertaken to produce new airport legislation throughout 2004. New legislation is expected to be tabled in the spring of 2005.

During 2002 and 2003, Transport Canada, with the assistance of independent financial experts, embarked on a number of key studies examining the value of leased NAS airports, the impact on the air sector and the travelling public, and the fairness and equity of the current rent model. These studies were completed in 2004 and will be used as key inputs to a government decision expected in 2005.

Regional and Small Airports Study

In 2004, Transport Canada completed a study to analyze the financial viability of regional and small airports that have been transferred by the Department since the introduction of the National Airports Policy (NAP) in 1994. The NAP provides a framework that defines the Government of Canada's role regarding airports. The study was launched following the decision to continue the divestiture initiative; it will serve to help the Department understand the impact of federal government divestitures on affected communities. More than 90 airports across the country were approached to participate in the study. Of these, approximately 70 per cent responded in full or in part to the survey sent to them in the summer of 2003. The completed study was released on September 23, 2004, and can be found on the Web at www.tc.gc.ca/programs/airports/menu.htm.

Air Travellers Security Charge

The Air Travellers Security Charge came into effect on April 1, 2002, to fund the cost of the enhanced air travel security system that was introduced in response to the 2001 terrorist attacks in the United States. The charges were initially set at $12 per enplanement, up to a maximum of $24 per ticket, for air travel within Canada, $12 for transborder air travel to the continental United States, and $24 for other international air travel. Beginning in March 2003, the charge for travel within Canada was reduced to $7 for one-way travel and to $14 for round-trip travel. A further reduction took effect on April 1, 2004. Current charges are set at $6 each way for domestic flights, $10 for transborder air travel and $20 for other international travel.

The security charge was applicable in 2004 to flights between the 89 airports in Canada at which the Canadian Air Transport Security Authority delivers the enhanced air travel security system.

Computer Reservation Systems

On May 7, 2004, following extensive consultations by Transport Canada in 2003 and 2004 with members of the travel distribution industry, air carriers and other governments, the amended Computer Reservation Systems Regulations were published in the *Canada Gazette*, Part II. The amendments move to a more deregulated system, while continuing to protect the interests of air travellers. They also recognize significant changes, such as the emergence of the Internet as an information and sales tool, which have occurred since the original regulations were put in place in June 1995.

Airlines, for example, will no longer be required to participate in all computer reservation systems operating in Canada. Rather, they will be able to decide how best to distribute and sell their air services. At the same time, the regulations will continue to ensure that travel agents have access to neutral and non-discriminatory information on behalf of consumers and that no carrier is disadvantaged in computer reservation system displays. Overall, the amended regulations give way to market forces in many areas that were previously regulated and allow for stakeholders to negotiate on more commercial terms, benefiting all industry stakeholders.

Transport Canada will continue to actively monitor changes in the airline and travel distribution industries, as well as the evolution and development of technology in air travel distribution, due largely to the emergence and significance of the Internet.

Electronic Collection of Air Transportation Statistics

The Electronic Collection of Air Transportation Statistics (ECATS) initiative began in April 2003 with the objectives of collecting operational air transportation statistics electronically from the approximately 170 air carriers serving Canada, improving the timeliness of air transportation statistics to industry and government and reducing the reporting burden and associated costs to stakeholders. Transport Canada is currently collecting air transportation data electronically from the majority of airlines originally identified in the list of 170 airlines and the initiative remains on schedule with a completion date of March 31, 2005. Planning for the second phase of ECATS is well underway with a focus on expanding the electronic collection process to include air cargo, general aviation and other air carrier information.

Third-Party War and Terrorism Liabilities Indemnity

Since international insurers withdrew previous levels of coverage following the events of September 2001, the federal government has been providing short-term indemnification for third-party war and terrorism liabilities for providers of essential aviation services in Canada. This indemnity remained in force in 2004 for renewable periods of 90 days. Despite some recovery in the insurance markets, previous levels of coverage were still not available at reasonable prices. Other countries provide similar support to their carriers.

Cape Town Convention and Protocol

On March 31, 2004, Canada became the 28th State to sign the Convention on International Interests in Mobile Equipment and the Protocol to the Convention on International Interests in Mobile Equipment on Matters specific to Aircraft Equipment.

Bill C-4, an Act to implement the Convention on International Interests in Mobile Equipment and the Protocol to the Convention on International Interests in Mobile Equipment on Matters Specific to Aircraft Equipment, was introduced in the House of Commons on October 8, 2004. The Bill and the eventual ratification of Convention and Protocol will facilitate and encourage international asset-based financing, i.e., financing using the value of equipment as security for payment. The new insolvency rules would reduce the risks associated with financing aircraft, thereby providing greater certainty to creditors. The harmonized legal framework is expected to improve sales for aircraft manufacturers and financiers while minimizing their risk of loss.

Preclearance

United States border preclearance allows travellers and their goods to be inspected by U.S. preclearance officers for the purposes of customs, immigration, public health, food inspection, and plant and animal health before flights depart from Canada for U.S. destinations. This enables travellers to be treated as domestic passengers upon arrival in the U.S., where they can enjoy shorter and easier connections to other U.S. cities, as well as direct access to U.S. airports that have no customs and immigration inspection facilities.

In December 2004, the Government of Canada announced the United States' agreement to extend the Canada-U.S. preclearance program to Halifax International Airport. The United States will extend preclearance to Halifax as soon as the airport's new preclearance facility is completed. Halifax becomes the eighth Canadian airport to offer preclearance, in addition to Vancouver, Calgary, Edmonton, Winnipeg, Toronto, Ottawa and Montreal.

Multiple Designation Policy

In 2004, the Minister awarded new designations pursuant to the 2002 multiple designation policy. The policy allows all Canadian carriers to apply to operate scheduled international air services to any international market. The designations are as follows: Air Transat (Toronto – Manzanillo (Mexico) and Winnipeg – Puerto Vallarta), Zoom Airlines (Ottawa – Puerto Vallarta), CanJet Airlines (Dominican Republic) and an extension of Air Canada's temporary designation to Grenada.

International Cargo Transshipment Policy

In the Fall 2004, the Minister announced his decision to approve an application from the Winnipeg Airport Authority for the participation of the Winnipeg International Airport in the federal government's international air cargo transshipment program. The transhipment program was developed in the 1980's to assist smaller or under-utilized airports by allowing air carriers, in the absence of operating rights under bilateral air transport agreements, to carry cargo to and from Canada enroute to third countries. Winnipeg International Airport becomes the fifth Canadian airport to participate in the program alongside Mirabel, Hamilton, Windsor, and Gander.

Bilateral Agreements

Canada had more than 70 bilateral air transport agreements or arrangements for international air services in place at the end of 2004. The federal government participated in seven rounds of negotiations with five countries and held consultation meetings with fourteen other countries during the year. An amended air transport agreement was concluded with the Russian Federation expanding the rights to operate to and to overfly one another's territory. Similarly, an agreement was reached

expanding the airline operating opportunities for scheduled air services between Canada and Japan. Pending the conclusion of an agreement with the Republic of Colombia, a temporary arrangement was reached permitting limited air services. Temporary air services arrangements with Israel and Singapore were extended allowing existing air services to continue. An arrangement was reached with Brazil regarding the weekly frequency of flights, and new tariff regimes were put in place with Barbados, St. Kitts, Saint Lucia, and Trinidad and Tobago.

INFRASTRUCTURE

Canada's air transportation infrastructure consists of aerodromes and a civil Air Navigation System (ANS). Since the introduction of the National Airports Policy (NAP) in 1994, the federal government has been reducing its role in the management, operation and ownership of airports. Transport Canada's role has shifted from owner and operator to landlord and regulator of Canadian airports. Transport Canada continues to be responsible for the regulation and safety of the ANS, but facility ownership was transferred to NAV CANADA. These changes were designed to promote safety, efficiency, affordability, service integration, innovation and commercialization. The transfer process has been largely completed and the current state of transfer is posted monthly on the Internet at www.tc.gc.ca/programs/airports/status/menu.htm.

AIRPORTS

Canada has approximately 1,700 aerodromes; facilities registered with Transport Canada as aircraft take-off and landing sites. The aerodromes are divided into three categories: water bases for float planes, heliports for helicopters and land airports for fixed-wing aircraft.

Most of Canada's commercial air activity takes place at certified land airports; sites that are required to meet Transport Canada's airport certification standards because of their level of activity or location.

AIRPORT AUTHORITY REVENUES AND EXPENSES

The NAP designated 26 National Airport System (NAS) airports as essential to the national transportation infrastructure. Of these, 22 were transferred by way of long-term leases to airport authorities. The airport authorities are not-for-profit, non-share capital corporations, with locally nominated and publicly accountable Boards of Directors, which are responsible for the management, operation and development of the individual NAS airports. The three territorial NAS airports were transferred outright to the three territorial governments and Kelowna Airport is operated by the City of Kelowna.

Airport authority financial statements for the year ending in 2003 are shown in Table A9-1 in the Addendum.

AIRPORTS CAPITAL ASSISTANCE PROGRAM

Since April 1995, Transport Canada has provided the Airport Capital Assistance Program (ACAP) to help eligible non-NAS airports finance capital projects related to safety, asset protection and operating cost reduction. To be eligible, the airports must receive a minimum of 1,000 passengers annually, meet airport certification requirements, and not be owned by the federal government. In 2004, the program announced 42 projects at 35 airports for funding at an estimated total of $34.3 million. Table A9-2 in the Addendum shows the allocation of funds by province since the inception of the program. ACAP projects approved in 2004 are listed in Table A9-3 in the Addendum.

AIRPORT IMPROVEMENT FEES

A number of airport authorities collect Airport Improvement Fees (AIFs) to pay for and finance their capital expenditures. AIFs now represent approximately 22 per cent of total NAS airport revenues on average and this percentage continues to grow. Currently, most AIFs vary from $10 to $15 per passenger. The majority of AIFs are collected through the airlines ticket systems, but some are collected directly by the airport authority. A list of the current AIFs for NAS airports is displayed in Table A9-4 of the Addendum.

FINANCIAL PERFORMANCE OF NAS AIRPORTS

The outbreak of Severe Acute Respiratory Syndrome (SARS) contributed to passenger volume reductions in 2003 of approximately four per cent at Toronto and Vancouver airports. This drop at Canada's two busiest airports was more than enough to offset modest traffic increases at other airports, resulting in no change in overall passenger traffic. Despite this fact, revenues continued to rise in 2003, with operating revenues and airport improvement fees both increasing by 8.5 per cent. Some of the smaller NAS airports saw their revenues decline or remain relatively unchanged.

In 2003, airport costs increases outstripped revenue gains. The authorities' combined operating costs rose by 14.5 per cent in 2003, due in part to the write-off of more than $50M in Air Canada receivables. Costs also increased in the areas of fuel, security and the operation of new infrastructure. The largest cost increase was in the area of interest charges related to capital infrastructure, where costs rose by 32 per cent. The large increases in non-operational costs (i.e., interest, amortization) led to a substantial decline (93 per cent) in the authorities' combined net income, with authorities such as Toronto, Montreal, Gander, Saint John and Fredericton ending the year in a deficit position.

Total rent recorded by the airport authorities in 2003 was $241.5 million, with $17.6 million in rent being deferred by eight authorities in the last six months of 2003 as a result of the short-term financial relief program announced by the Government in July 2003. Under the program, airport authorities that pay rent receive a reduction of a minimum of 10 per cent of their rents for a 24-month period commencing July 1, 2003, with larger deductions depending on the decline in passenger levels experienced between April 2002 and April 2003. The rent reductions are to be recovered, interest free, over a 10-year period beginning in 2006. As part of this program, the smaller NAS airports were able to defer their chattel payments by two years, beginning January 1, 2004.

Airport authorities made $1.6 billion in capital expenditures in 2003 as several airports including Ottawa, Toronto, Montreal, Calgary, Edmonton and London continued major capital expansions. Toronto accounted for $1 billion of the total expenditures and continues work on its Airport Development Program. Its new Terminal 1 was opened in April 2004. In 2003, Montreal completed work on Phase I of its Terminal Expansion Project at Pierre Elliott Trudeau International Airport. London's new terminal building opened in November 2003. Regina is constructing Phase I of its Air Terminal Building Re-development Project, which is expected to cost $15 million. Prince George has begun a three-phase, $20 million airport improvement plan. In terms of planned expenditures, several authorities have major capital projects under development. Vancouver has announced plans to spend $1.4 billion over the next 10 years to upgrade its facilities and Winnipeg has unveiled plans for an airport redevelopment program that will cost $350 million for the first phase commencing in 2004/05. Halifax and Victoria have also announced plans for further airport infrastructure development. A substantial amount of the capital infrastructure was financed through debt, with the total long-term debt of NAS airports amounting to $7.6 billion at December 2003.

Air Navigation System

NAV CANADA is a not-for-profit, private corporation that owns and operates Canada's civil air navigation system — providing air traffic control services, flight information, weather briefings, airport advisories and electronic aids to navigation. NAV CANADA has the right to set and collect customer service charges from aircraft owners and operators. Most customer service charges are applicable to commercial air carriers. For more information on NAV CANADA, visit the corporation's Web site at www.navcanada.ca.

INDUSTRY STRUCTURE

Airlines

Air Canada Family

The Air Canada family of companies remained Canada's largest airline in 2004. It earned revenues of $7.6 billion between October 1, 2003, and September 30, 2004. Air Canada provided service to 21 points in Canada, 30 in the United States and 54 international destinations. It operates a fleet of 199 aircraft and employs an average of 29,500 full-time employees. Air Canada is a founding member of Star Alliance, a consortium of 15 airlines that serve 772 destinations in 133 countries. Jazz operates service on less busy domestic and transborder routes, covering 69 destinations, particularly to small communities. Jazz employs an average of 3,500 employees and operates a fleet of 90 aircraft. Air Canada placed new orders for 90 regional jets from Bombardier and Embraer. The new aircraft are to be delivered over a four-year period beginning in the fall of 2004. Air Canada Vacations offers tour packages to popular destinations. Jetz, Air Canada's jet charter service, offers premium charter service to sports teams and businesses. In addition, three independent local service operators (Air Georgian, Air Labrador and Central Mountain Air) offer regional services on behalf of Air Canada.

Low-Cost Carriers

Canadians now receive domestic and transborder air services from a number of low-cost, no-frills carriers. These carriers have been the source of most traffic growth, a trend that is echoed in Canada and around the world. Calgary-based WestJet is now Canada's second-largest airline, having earned just over $1 billion in revenues between October 1, 2003, and September 30, 2004. It serves 31 cities with 54 aircraft and 4,500 employees. WestJet began scheduled transborder services in the fall of 2004, notably to California and Florida. WestJet also made several announcements regarding its fleet expansion. The company plans to add fifteen new aircraft to its fleet in 2005 and another six new aircraft by the end of 2006. Montreal-based Jetsgo continued expansion of its fleet, having purchased eleven used 11 Fokker 100 aircraft to supplement its existing fleet of 14 MD-83s. Five additional aircraft are to be put in service by mid-2005. With 1,200 employees, Jetsgo serves 18 Canadian cities and 10 U.S. destinations. CanJet, based in Halifax, operates nine aircraft to 14 destinations in Eastern North America. A further three new aircraft are to be added to the fleet in 2005. In addition to their scheduled services, all three low-cost airlines offer charter services.

Leisure Carriers

A number of airlines focus their business on leisure destinations, carrying mostly tourists to warm southern destinations or Europe, depending on the season. Traditionally charter airlines, they offer vacation packages, generally to Europe in the summer and to the south in the winter. However, most leisure airlines now offer scheduled flights in those markets where they have been designated to do so. The major players in this segment of the industry are Air Transat and Skyservice Airlines. Montreal-based Air Transat flies 14 aircraft to 90 destinations. Air Transat also offers scheduled services to France and the United Kingdom. Skyservice Airlines, based in Mississauga, has a fleet of 24 aircraft and has 1,200 employees. Two other leisure airlines are based in Canada. Zoom Airlines provides scheduled services from several cities in Canada to the United Kingdom and France, as well as charter flights to the Caribbean, with two aircraft. Vancouver-based Harmony Airways offers scheduled flights from three Canadian cities to four U.S. destinations, as well as charter services, with three aircraft.

Foreign Airlines

Twenty-three U.S. airlines fly to 18 Canadian cities, while 37 foreign airlines provide service between Canada (primarily from Montreal, Toronto and Vancouver) and 51 international destinations in 31 countries. For a list of foreign airlines serving Canada on a scheduled basis, see Table A9-5 in the Addendum.

Northern Airlines

A number of airlines provide year-round scheduled and charter service across the three territories with combination passenger and cargo aircraft. The major participants are Air North, Calm Air, Canadian North (incorporated as Air Norterra) and First Air. Services by these airlines are complemented by other airlines such as Aklak Air, Kenn Borek Air and North-Wright Airways. They offer flights to the most remote communities in the Arctic. Most airlines in the region also provide Medevac services and other transport under contract to the federal and territorial governments.

Local Service Airlines

Smaller local service airlines provide service across Canada, particularly to remote communities, in niche markets (e.g., Bearskin Airlines' service between points in Ontario, and floatplane and helicopter services in British Columbia). They also operate alternative services in some regional markets (e.g., Hawkair in British Columbia and Provincial Airlines in eastern Canada). Addendum Table A9-6 lists most of these airlines and their major areas of operation. Like the airlines serving the Arctic, many of the local service airlines provide emergency transport under contract to the federal and provincial governments.

All-Cargo Airlines

A number of all-cargo airlines provide jet service on behalf of Canada Post, courier companies, freight forwarders, consolidators and shippers. They include AllCanada Express and Cargojet Canada, both based in Mississauga, Kelowna Flightcraft of British Columbia, and Morningstar Air Express of Edmonton.

Business and Commercial Aviation

The actual number of airlines operating in Canada is much larger than the previous section implies. At the end of 2004, the Canadian Transportation Agency reported that more than 2,360 licences were active. Table A9-7 in the Addendum shows the number of licences held as of December 31, 2004. The number of personnel licences issued by Transport Canada confirms the importance of the commercial sector. The number of commercial licences held in 2004 is roughly equal to the number of air transport licences. Addendum Table A9-8 summarizes the number of personnel licences issued, while Table A9-9 gives a provincial breakdown of the licences.

Business aviation continued to grow in 2004 due to fractional ownership, which allows individuals or businesses that would not otherwise be permitted to own aircraft on their own to share aircraft use by purchasing units of flight time. This type of aircraft ownership is regulated in Canada as a commercial air service.

Specialty air services use aircraft but do not involve the movement of passengers or cargo between two points. They include such diverse services as flight training, parachute jumping, glider towing, aerial forest fire management and firefighting, aerial inspection and construction, aerial photography and surveying, advertising, weather sounding, crop spraying and heli-logging, as well as hovercraft services. While some large companies (e.g., Canadian Helicopters) are represented in this sector, many of the companies are very small operators serving local markets.

Recreational Aviation

Recreational flying in its various forms represented the bulk of general aviation activity, accounting for about two thirds of Canada's pilots and three quarters of all aircraft registered in Canada in 2004. It is also the largest segment of Canadian civil aviation activity. While most recreational aircraft are standard planes, this segment also includes all other types of recreational aircraft such as ultra-lights, gliders and balloons, among others. Table A9-10 in the Addendum gives further detail on the types of aircraft operated.

PRICE, PRODUCTIVITY AND PERFORMANCE

Air Transport Industry

Total passenger revenues in 2003 declined by 12 per cent. Both lower passenger prices (-5.8 per cent) and a drop in passenger demand (-6.6 per cent) contributed to the decline in revenues. These declines were due, in part, to the decrease in international passenger traffic, reflecting the impact of the SARS outbreak and the war in Iraq. However, all three market segments (domestic, transborder and international) experienced revenue declines. Prices declined most in the domestic market due to increased low-cost competition. Between 1998 and 2003, passenger prices increased by 1.3 per cent per year on average, while output decreased on average by 2.2 per cent annually. With respect to air cargo, based on preliminary data, prices increased by 9.5 per cent during 2003, while output declined by 16 per cent.

Productivity of the air transport industry increased by 1.3 per cent in 2003. This improvement was due to increases in both labour and fuel productivity, as the industry continued to move towards more fuel-efficient aircraft. Capital productivity declined noticeably in 2003. It is important to note, however, that such a partial measure of productivity is particularly volatile and difficult to measure in the air transport industry. While total unit costs recorded an overall marginal decline of 0.3 per cent in 2003, significant variations were experienced in the various cost components. Unit fuel costs were up 15.5 per cent as oil prices increased during the year; while unit labour costs decreased by 8.1 per cent, a situation largely explained by the labour concessions Air Canada obtained during its restructuring.

The air transport industry's revenues declined in 2003. One of the key drivers of this decline was the drop of approximately $1.5 billion in 2003 in Air Canada's revenues as it continued its restructuring.

FREIGHT TRANSPORTATION

Air cargo is carried in the belly-hold of passenger aircraft, in passenger/cargo combination or in all-cargo aircraft. Canada's domestic air cargo market is deregulated; as such, there are no restrictions on routing, capacity or price. Transborder and international air cargo services are covered by bilateral air agreements, other international agreements and national policies. Some all-cargo airlines do provide charter services outside of Canada on behalf of foreign-based airlines but have little presence on their own in international markets. However, a significant amount of cargo is carried in the belly-hold of passenger aircraft.

There are several operators in Canada providing dedicated all-cargo service, with a total of 50 aircraft. In addition, Air Canada provides air cargo service as part of its scheduled passenger air services. Cargo revenues accounted for six per cent of its revenues in the first three quarters of 2004. In the North, Canadian North and First Air also provide air cargo services, along with numerous other smaller operators.

Table A9-11 in the Addendum shows the volume of goods carried by Canadian air carriers from 1993 to 2003. Overall, the number of tonnes carried decreased by 18 per cent in 2003 over 2002 with all three sectors showing significant decreases. Addendum Table A9-12 shows the operating revenues generated by goods carried by Canadian air carriers. Between 2002 and 2003, domestic revenues dropped by 16 per cent, while international and transborder revenues (combined) decreased by 45 per cent.

Table A9-13 in the Addendum compares the value of goods shipped by air versus other modes. While air cargo trade between Canada and the United States rose steadily between 1997 and 2000, the market has decreased each year since then, with a decline of $15.4 billion, or 33 per cent. This loss was higher in the import sector than the export sector. Air cargo's share of total Canada–U.S. trade was 5.8 per cent in 2004, down from a high of 8.1 per cent in 2000.

As Table A9-13 in the Addendum shows, Canada's air trade with countries other than the United States increased significantly, by 19 per cent, in 2004 over 2003. This result can be explained by the surge in exports and imports, which increased by 26 per cent and 15 per cent, respectively in 2004 over 2003. Trade remained import-oriented, making up about 53 per cent more than the value of exported goods. The air mode's share of the total value of trade with other countries was 22.6 per cent in 2004, compared to a peak of 23.4 per cent in 2004.

Of goods shipped by air, 83 per cent had eastern provinces as their origin or destination. As expected, the United States, followed by countries in Western Europe and in Asia, were the main markets for trade with Canada using air transport. For a regional breakdown of imports and exports, see Table A9-14 in the Addendum. Table A9-15 in the Addendum shows the value of imports and exports shipped by air by country for the top 25 countries. Table A9-16 in the Addendum breaks out the commodity group for goods shipped by air. Not surprisingly, high-value items such as machinery and electrical equipment, aircraft and transport equipment, and other manufactured goods make up the majority of the goods shipped by air.

PASSENGER TRANSPORTATION

TRAFFIC

Passenger traffic in 2004 was nearly equal the previous peak reached in 2000, with 60 million passengers. No significant event affected air traffic in 2004, although Air Canada had reduced capacity while it was under creditor protection. In contrast, all of the low-cost carriers increased their capacity during the year.

As shown in Table 9-1, the domestic, transborder and international sectors each registered significant growth with increases of eight per cent, 10 per cent and 18 per cent, respectively. The high growth can be explained in part by a recovery after the Severe Acute Respiratory Syndrome outbreak, however, traffic in all three sectors increased significantly over 2002 levels. Despite these improvements, airline revenues declined.

For a summary of 2002 traffic at the 26 NAS airports, by sector and region, see Table A9-17 in the Addendum.

TABLE 9-1: AIR PASSENGER TRAFFIC, 2000 – 2004

(Thousands of passengers)

	Domestic	Transborder	International	Total
Air Passengers				
2000	26,001	20,824	13,177	60,002
2001	24,994	18,568	13,196	56,757
2002	23,862	17,575	12,930	54,367
2003	24,434	16,809	12,661	53,903
2004	26,462	18,574	14,952	59,988
Annual Change (Per cent)				
2001/00	(3.9)	(10.8)	0.1	(5.4)
2002/01	(4.5)	(5.3)	(2.0)	(4.2)
2003/02	2.4	(4.4)	(2.1)	(0.9)
2004/03	8.3	10.5	18.1	11.3

Notes: Previously published data for 2001 have been revised due to the recent availability of more accurate information. Because the 2002 data used last in last year's report were estimates based on the reported 2001 data, those numbers have also been revised.
Data estimated for 2003 and 2004.
Passenger Traffic is based on enplaned and deplaned passengers, but results for the domestic sector have been divided by two to avoid double counting of passengers.

Source: Statistics Canada

SERVICES

DOMESTIC

Low-fare airlines continued their rapid expansion in 2004 with the most attention paid to the heavily travelled transcontinental routes. WestJet boosted its presence in Toronto, transferring most of the flights that had been serving Hamilton to Pearson International Airport and increasing service frequency in most major markets. Jetsgo was also active in the Toronto market, increasing the frequency of flights in most markets that it had already been serving and introducing first-time service to Moncton and Quebec City. CanJet filled some of the void left by WestJet in Hamilton by introducing a new Hamilton-Ottawa service.

As part of its restructuring plan, Air Canada eliminated several aging aircraft from its fleet and ordered 90 new regional jets. Its subsidiary Zip terminated its operations and was fully integrated with Air Canada. Overall, Air Canada reduced flight frequencies on its network, but continued service to most points. The only exceptions were in British Columbia, where Jazz ceased operations in Fort Nelson in June and in Quesnel and Williams Lake in October. Jazz also discontinued direct service in Quebec on the Quebec-Val d'Or/Rouyn route.

Local service airlines were also active in 2004. Regional 1, a new airline, started to operate scheduled flights from Lethbridge and Red Deer in Alberta to Kelowna and Vancouver in British Columbia. Central Mountain Air picked up air service in Fort Nelson, Quesnel and Williams Lake after Air Canada exited those markets. Hawkair also expanded its services to Fort Nelson and Fort St. John in British Columbia. In Alberta, Peace Air started new services in Red Deer and Medicine Hat. Pascan Aviation, based in St-Hubert, Quebec, expanded to New Brunswick with daily flights to St. Leonard and Charlo.

See Addendum Table A9-18 for a list of new and discontinued domestic services.

TRANSBORDER

In 2004, the transborder markets received more attention from Canadian low-cost airlines. WestJet started scheduled transborder flights in September 2004 and by the end of the year served seven U.S. destinations (Los Angeles, San Francisco, Phoenix, Fort Lauderdale, Tampa, Orlando and New York) with non-stop flights from Calgary, Toronto and Vancouver. Jetsgo continued to offer transborder flights and added three new U.S. destinations. Along with CanJet, the two low-cost carriers added the Toronto-New York (La Guardia) route. As well, Harmony Airways started scheduled flights from Vancouver and Victoria to Hawaii. Despite the significant growth in the transborder sector, low-cost airline participation in the markets is still minimal. Furthermore, no U.S. low-cost airlines entered the transborder market.

The major airlines made some adjustments to their networks. Air Canada's restructuring affected its transborder routes; although service was continued to all points, flights were cut on most routes. Some major U.S. airlines, despite their financial difficulties, added new transborder service. America West was the most active carrier, adding several new routes that included Calgary, Edmonton and Vancouver. Northwest started new services in Kitchener/Waterloo, added a new Toronto-Memphis route and converted seasonal flights to year-round service in Halifax and Quebec City. Continental Airlines offered new flights to St. John's, Newfoundland, while United Airlines added service from Chicago to Edmonton and Ottawa. As part of its restructuring, US Airways partially withdrew from some routes in Montreal and Ottawa. All of the new transborder services offered by major U.S. airlines involve regional jets. For more details on both new and discontinued transborder services, see Table A9-19 in the Addendum.

INTERNATIONAL

Air Canada continued to focus its expansion efforts on Asia and on Latin America. The airline introduced a new non-stop Toronto-Hong Kong year-round service and restored the Toronto-Tokyo and Vancouver-Nagoya routes that were suspended in 2003. In Latin America, Air Canada started new services to Bogotá, Caracas and Lima. The airline continued to expand seasonal weekend-only services to destinations in the Caribbean, a process that started in the fall of 2003. Zoom airlines started to operate scheduled flights to Paris, France, and points in the United Kingdom from several Canadian cities. There was no significant withdrawal of service on international routes except for BMI's new Toronto-Manchester route, which was initiated in the spring of 2004. Current plans indicate that the seasonal route will be taken over by Air Canada in 2005. Air Canada and BMI are both full members of the Star Alliance. Refer to Addendum Table A9-20 for a list of new and discontinued international services.

COMPETITION

In response to low-cost carrier competition, Air Canada introduced a simplified fare structure across its network and ticket passes on certain heavily travelled routes. The new fare structure, where all fares are one-way and require no minimum stay, is transparent and allows customers to choose a fare based on price and flexibility. There are five fares for the North American market, ranging from Tango, the most economical, to Executive Class, the most flexible. The amount of reward points collected also depends on the fare chosen by the customer. A similar fare structure is applied to international travel with four different fares. To increase its competitiveness, Air Canada introduced four sets of passes, where a pass is a prepaid package of flight credits. The airline first introduced the Latitude Pass for Rapidair, in response to the competitive service introduced in 2004 by Jetsgo and WestJet on the Toronto-Ottawa-Montreal triangle. This was followed by the introduction of Latitude Passes for the West between the cities of Calgary, Edmonton and Vancouver, City Passes (on selected domestic and transborder routes), and Sun Passes for destinations in the south from Montreal or Toronto.

Domestically, low-cost airlines continued to increase their share of the market at the expense of Air Canada. From December 2003 to December 2004, Air Canada's capacity share dropped by eight percentage points to 52 per cent, while WestJet's share rose to 29 per cent, Jetsgo to nine per cent and CanJet to three per cent. In transcontinental markets, WestJet made significant gains at the expense of Air Canada. Increased service by WestJet, a new Edmonton-Vancouver route by Jetsgo and the reduction in flights as a result of the shutdown of Zip all contributed to an eight percentage point decrease in Air Canada's share of the market in western Canada. In Ontario and Quebec, Jetsgo and CanJet made minimal gains, and in Atlantic Canada, Air Canada lost 10 percentage points, mostly to CanJet, but also to Jetsgo. Carriers such as Canadian North and First Air maintained their strength in the North. For more detailed information on domestic market share by airline and by region in December 2004, see tables A9-21 and A9-22 in the Addendum, and for the summarized results of the top 25 domestic markets, see Table A9-23.

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